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Haley & Aldrich, Inc.

REPORT ON
PHASE TWO OIL AND HAZARDOUS MATERIAL SITE EVALUATION
PARCEL 18 AND PARCEL 18B
BOSTON, MASSACHUSETTS

VOLUME II

Consulting

Geotechnical Engineers,

Geologists and

Hydrogeologists

REPORT ON
PHASE TWO OIL AND HAZARDOUS MATERIAL SITE EVALUATION
PARCEL 18 AND PARCEL 18B
BOSTON, MASSACHUSETTS

VOLUME II

APPENDICES G AND H

by

Haley & Aldrich, Inc.
Cambridge, Massachusetts

for

Frederick R. Harris, Inc.
Boston, Massachusetts

File No. 10003-41

October 1989

Appendix G

HALEY & ALDRICH, INC.
238 Main Street Cambridge MA 02142
Tel 617/492 6460

CHAIN OF CUSTODY RECORD

PAGE OF

H&A FILE NO. 10003-41
PROJECT Parcel 18
H&A CONTACT Kleo Taliadouros

LABORATORY ENSECO
ADDRESS Fresh Pond Pkwy, Cambridge, MA
CONTACT

DELIVERY DATE 7 October 1988
DATE FINAL REPORT DUE 1 week
PROJECT MANAGER'S INITIALS JSC

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING		SAMPLE DEPTH	SAMPLE TYPE	ANALYSES										NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
		DATE	TIME			VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	TPH by IR	EP tox METALS				
B1-S6		3 OCT 88	NA	16'-18'	SOIL		X			X		X				1	
B2-S5		4 OCT 88	NA	14'-16'	SOIL				X			X	X			1	

I. Sampled and Relinquished by
Sign Terry A. Townsend
Print Terry A. Townsend
Firm H&A
Date 10/7/88 Time 10:30.

I. Received by
Sign
Print David M. Bois
Firm H&A
Date 7 OCT 88 Time 1030

II. Relinquished by
Sign
Print David M. Bois
Firm H&A
Date 7 OCT Time 1102

II. Received by
Sign Venus Hammack
Print Venus HAMMACK
Firm ERCO
Date 10/7/88 Time 1102

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☐ No ☐ Yes

If Yes, explain in remarks.

		VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	TPH by IR	EP tox METALS		
LIQUID	VOA Vial										
	Glass Bottle										
	Plastic Bottle										
	Preservative										
	Container Volume										
SOLID	VOA Vial										
	Glass Jar		X		X	X		X	X		
	Plastic Jar										
	Preservative		A		A	A		A	A		
	Container Volume		8 oz		8 oz	8 oz		8 oz	8 oz		

Note: Sample bottles supplied by lab, unless indicated.

PRESERVATION KEY: A - Sample chilled, B - Filtered, C - Acidified with ______ D - NaOH, E - NaThiosulfate F - Other

REMARKS: (Sample storage, nonstandard sample bottles)

ANALYTICAL RESULTS

The method number provided on each data report sheet refers to a publication originating from a regulatory or standard-setting organization. In general, the methods employed are those specified by the U.S. Environmental Protection Agency and other state and federal agencies. In cases where an approved regulatory method does not exist, a method developed by Enseco will be employed to meet the specific needs of the client. The methods commonly employed by Enseco are based on methods from the following references.

U.S. Environmental Protection Agency. 1983. Methods for chemical analysis of water and wastes. EPA-600/4-79-020. Cincinnati, OH, March.

U.S. Environmental Protection Agency. 1984. Test methods for evaluating solid waste, physical/chemical methods. (SW-846); Washington, D.C. April.

U.S. Environmental Protection Agency. 1986. Methods for the determination of organic compounds in finished drinking water and raw source water. Cincinnati, OH, September.

"Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act," 40 CFR, Part 136; Federal Register, Vol. 49, No. 209 (1984).

American Public Health Association, American Water Works Association, Water Pollution Control Federation. 1985. Standard methods for the examination of water and wastewater, 16th Edition. Washington, D.C., April.

Current EPA Contract Laboratory Program (CLP) protocols for the analysis of organic and inorganic hazardous substances including chlorinated dioxins and furans.

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: B1-S6
Laboratory ID: 1252-01
Matrix: Solid Sampled: 10/03/88 Received: 10/07/88
Authorized: 10/11/88 Prepared: 10/13/88 Analyzed: 10/22/88

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	380
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	380
2-Chlorophenol	ND	µg/kg (dry wt)	380
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	380
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	380
Benzyl alcohol	ND	µg/kg (dry wt)	380
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	380
2-Methylphenol	ND	µg/kg (dry wt)	380
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	380
4-Methylphenol	ND	µg/kg (dry wt)	380
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	380
Hexachloroethane	ND	µg/kg (dry wt)	380
Nitrobenzene	ND	µg/kg (dry wt)	380
Isophorone	ND	µg/kg (dry wt)	380
2-Nitrophenol	ND	µg/kg (dry wt)	380
2,4-Dimethylphenol	ND	µg/kg (dry wt)	380
Benzoic acid	ND	µg/kg (dry wt)	1,900
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	380
2,4-Dichlorophenol	ND	µg/kg (dry wt)	380
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	380
Naphthalene	ND	µg/kg (dry wt)	380
4-Chloroaniline	ND	µg/kg (dry wt)	380
Hexachlorobutadiene	ND	µg/kg (dry wt)	380
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	380
2-Methylnaphthalene	ND	µg/kg (dry wt)	380
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	380
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	380
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	1,900
2-Chloronaphthalene	ND	µg/kg (dry wt)	380
2-Nitroaniline	ND	µg/kg (dry wt)	1,900
Dimethyl phthalate	ND	µg/kg (dry wt)	380
Acenaphthylene	ND	µg/kg (dry wt)	380
3-Nitroaniline	ND	µg/kg (dry wt)	1,900
Acenaphthene	ND	µg/kg (dry wt)	380

(continued on following page)

ND = Not detected.

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: 81-S6
Laboratory ID: 1252-01
Matrix: Solid Sampled: 10/03/88 Received: 10/07/88
Authorized: 10/11/88 Prepared: 10/13/88 Analyzed: 10/22/88

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	1,900
4-Nitrophenol	ND	µg/kg (dry wt)	1,900
Dibenzofuran	ND	µg/kg (dry wt)	380
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	380
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	380
Diethyl phthalate	ND	µg/kg (dry wt)	380
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	380
Fluorene	ND	µg/kg (dry wt)	380
4-Nitroaniline	ND	µg/kg (dry wt)	1,900
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	1,900
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	380
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	380
Hexachlorobenzene	ND	µg/kg (dry wt)	380
Pentachlorophenol	ND	µg/kg (dry wt)	1,900
Phenanthrene	ND	µg/kg (dry wt)	380
Anthracene	ND	µg/kg (dry wt)	380
Di-n-butyl phthalate	ND	µg/kg (dry wt)	380
Fluoranthene	ND	µg/kg (dry wt)	380
Pyrene	ND	µg/kg (dry wt)	380
Butyl benzyl phthalate	ND	µg/kg (dry wt)	380
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	760
Benzo(a)anthracene	ND	µg/kg (dry wt)	380
bis(2-Ethylhexyl)phthalate	ND	µg/kg (dry wt)	380
Chrysene	ND	µg/kg (dry wt)	380
Di-n-octyl phthalate	ND	µg/kg (dry wt)	380
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	380
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	380
Benzo(a)pyrene	ND	µg/kg (dry wt)	380
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	380
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	380
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	380

Solid content = 86%

ND = Not detected.

Reported by BP Approved by

HAZARDOUS SUBSTANCE LIST (HSL)
ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080/HSL List

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)

Client ID: B2-S5

Laboratory ID: 1252-02

Matrix: Solid   Sampled: 10/04/88   Received: 10/07/88

Authorized: 10/07/88   Prepared: 10/13/88   Analyzed: 10/18/88

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	120
beta-BHC	ND	µg/kg (dry wt)	120
delta-BHC	ND	µg/kg (dry wt)	120
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	120
Heptachlor	ND	µg/kg (dry wt)	120
Aldrin	ND	µg/kg (dry wt)	120
Heptachlor epoxide	ND	µg/kg (dry wt)	120
Endosulfan I	ND	µg/kg (dry wt)	120
Dieldrin	ND	µg/kg (dry wt)	240
4,4'-DDE	ND	µg/kg (dry wt)	240
Endrin	ND	µg/kg (dry wt)	240
Endosulfan II	ND	µg/kg (dry wt)	240
4,4'-DDD	ND	µg/kg (dry wt)	240
Endosulfan sulfate	ND	µg/kg (dry wt)	240
4,4'-DDT	ND	µg/kg (dry wt)	240
Endrin ketone	ND	µg/kg (dry wt)	240
Methoxychlor	ND	µg/kg (dry wt)	1,200
Chlordane	ND	µg/kg (dry wt)	1,200
Toxaphene	ND	µg/kg (dry wt)	2,400
Aroclor-1016	ND	µg/kg (dry wt)	1,200
Aroclor-1221	ND	µg/kg (dry wt)	1,200
Aroclor-1232	ND	µg/kg (dry wt)	1,200
Aroclor-1242	ND	µg/kg (dry wt)	1,200
Aroclor-1248	ND	µg/kg (dry wt)	1,200
Aroclor-1254	ND	µg/kg (dry wt)	2,400
Aroclor-1260	ND	µg/kg (dry wt)	2,400

Solid content = 59%

ND = Not detected.

Reported by LT   Approved by EK

PETROLEUM HYDROCARBON ANALYSIS BY IR

EPA Method 418.1

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: B1-S6
Laboratory ID: 1252-01
Matrix: Solid Sampled: 10/03/88 Received: 10/07/88
Authorized: 10/11/88 Prepared: 10/11/88 Analyzed: 10/20/88

Parameter	Result	Units	Reporting Limit
Petroleum hydrocarbon -----------	45	µg/g (dry wt)	40

Solid content = 86%

Reported by ______________ Approved by ______________

Enseco

PETROLEUM HYDROCARBON ANALYSIS BY IR

EPA Method 418.1

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: B2-S5
Laboratory ID: 1252-02
Matrix: Solid Sampled: 10/04/88 Received: 10/07/88
Authorized: 10/11/88 Prepared: 10/11/88 Analyzed: 10/20/88

Parameter	Result	Units	Reporting Limit
Petroleum hydrocarbon -----------	56	µg/g (dry wt)	40

Solid content = 60%

Reported by ______ Approved by ______

HYDROCARBON FINGERPRINTING

Modified ASTM Method D3328

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: B1-S6
Laboratory ID: 1252-01
Matrix: Solid   Sampled: 10/03/88   Received: 10/07/88
Authorized: 10/11/88   Prepared: 10/12/88   Analyzed: 10/16/88

Parameter	Result	Reporting Limit for Individual Hydrocarbon	Reporting Limit for Total Product	Percent Solids	Units
Total hydrocarbons	ND	0.25	10.0	68	µg/g (dry wt)

Qualitative Identification: NA

NA = Not applicable.
ND = Not detected at or above reporting limit.
All samples are corrected for the method blank.
Minimum reporting limit for individual hydrocarbons = 0.25 µg/g (dry wt).
Minimum reporting limit for total products = 10.0 µg/g (dry wt).
Internal standard recovery = 97%.

Reported by Bi   Approved by mm

EP TOXICITY METALS

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: B2-S5
Laboratory ID: 1252-02
Matrix: Solid Sampled: 10/04/88 Received: 10/07/88
Authorized: 10/11/88 Prepared: 10/17/88 Analyzed: 10/24/88

Parameter	Result in Leachate	Units	Reporting Limit	Regulated Limit in Leachate	Analytical Method
Arsenic	ND	mg/L	0.5	5	200.7
Barium	ND	mg/L	0.1	100	200.7
Cadmium	ND	mg/L	0.05	1	200.7
Chromium	ND	mg/L	0.1	5	200.7
Lead	ND	mg/L	0.5	5	200.7
Mercury	ND	mg/L	0.002	0.2	245.1
Selenium	ND	mg/L	0.05	1	270.2
Silver	ND	mg/L	0.05	5	200.7

ND = Not detected.

Reported by MP Approved by SDC

QUALITY ASSURANCE/QUALITY CONTROL

QUALITY ASSURANCE/QUALITY CONTROL

As an indication of the overall quality of the data generated by Enseco - Erco Laboratory for this report, the following controls have been provided (when applicable).

Reagent or analytical blanks are analyzed to assess the level of contamination which exists in the analytical system. An analytical blank, analyzed with every batch of samples, consists of reagents specific to the method. This blank is carried through every aspect of the procedure, including preparation, cleanup, and analysis. Ideally, the concentration of an analyte in the blank is below the reporting limit for that analyte. However, some common laboratory solvents and metals are difficult to eliminate to the part-per-billion levels commonly reported in environmental analyses. Therefore, analytical data are corrected for blank contamination before they are reported to the client.

Laboratory control samples (LCS) are used to monitor the laboratory's day-to-day performance of routine analytical methods. An LCS consists of a standard, control matrix which is spiked with a group of target compounds representative of the method analytes. The LCS is analyzed with environmental samples to provide evidence that the laboratory is performing the method within accepted QC guidelines.

An LCS has been established for most routine analytical methods. Reagent water is used as the control matrix for the analysis of aqueous samples. The LCS compounds are spiked into reagent water and carried through the appropriate steps of the analysis. As stated in SW-846 (third edition), a universal blank matrix does not exist for solid samples and therefore no matrix is used. The LCS for solid samples consists of the LCS compounds spiked into a reagent blank and carried through the appropriate steps of the analysis. The data thus obtained are used to set the LCS control limits. As sufficient laboratory data become available, the control limits are redefined based upon the most recent six months of LCS data. Control limits for accuracy are based on the historical average recovery of the LCS plus or minus three standard deviation units.

Surrogates are organic compounds that are similar to the analytes of interest in chemical behavior but which are not normally found in environmental samples. Enseco routinely adds surrogates to samples requiring GS/MS analysis and reports these surrogate recoveries to the client. These surrogates are added to samples to monitor the effect of the matrix on the accuracy of the analysis. Results are reported in terms of percent recovery.

PRIORITY POLLUTANT SEMIVOLATILE ORGANICS

EPA Method 8270 + 8270/HSL List

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)

Client ID: Laboratory Control Spike

Laboratory ID: 1084-07BS

Matrix:	Solid	Sampled:	NA	Received:	NA
Authorized:	NA	Prepared:	09/28/88	Analyzed:	10/20/88

Parameter	% Recovery	QC Advisory Limits
2-Chlorophenol	109*	25 - 102%
Phenol	84	26 - 90%
4-Chloro-3-methylphenol	82	26 - 103%
4-Nitrophenol	84	11 - 114%
Pentachlorophenol	75	17 - 109%
1,4-Dichlorobenzene	75	26 - 104%
N-Nitroso-di-n-propylamine	86	41 - 126%
1,2,4-Trichlorobenzene	92	38 - 107%
Acenaphthene	83	31 - 137%
2,4-Dinitrotoluene	81	28 - 89%
Pyrene	130	35 - 142%

*Value is outside QC advisory limits.

NA = Not applicable.

Reported by AVL

Approved by

PRIORITY POLLUTANT SEMIVOLATILE ORGANICS

EPA Method 8270 + 8270/HSL List

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike Dup.
Laboratory ID: 1084-07BSD
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 09/28/88 Analyzed: 10/20/88

Parameter	% Recovery	QC Advisory Limits
2-Chlorophenol	106*	25 - 102%
Phenol	82	26 - 90%
4-Chloro-3-methylphenol	76	26 - 103%
4-Nitrophenol	80	11 - 114%
Pentachlorophenol	77	17 - 109%
1,4-Dichlorobenzene	78	26 - 104%
N-Nitroso-di-n-propylamine	87	41 - 126%
1,2,4-Trichlorobenzene	86	38 - 107%
Acenaphthene	81	31 - 137%
2,4-Dinitrotoluene	79	28 - 89%
Pyrene	124	35 - 142%

*Value is outside QC advisory limits.

NA = Not applicable.

Reported by AVL Approved by

SEMIVOLATILE ORGANICS

Surrogate Recovery Summary

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Matrix: Solid
Authorized: 10/11/88 Received: 10/07/88

		Surrogate Compound (%)					
Erco ID	Client ID	2-Fluorophenol	d_5-Phenol	2,4,6-Tribromophenol	d_5-Nitrobenzene	2-Fluorobiphenyl	d_{14}-p-Terphenyl
1252-01	B1-S6	93	110	68	118	91	86
	QC Advisory Limits:	26-121%	24-113%	18-122%	23-120%	30-115%	18-137%

Reported by BP Approved by

HAZARDOUS SUBSTANCE LIST (HSL)
ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080/HSL List

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Erco Blank
Laboratory ID: 0594-01B
Matrix: Solid   Sampled: NA   Received: NA
Authorized: NA   Prepared: 10/13/88   Analyzed: 10/18/88

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (wet wt)	4
beta-BHC	ND	µg/kg (wet wt)	4
delta-BHC	ND	µg/kg (wet wt)	4
gamma-BHC (Lindane)	ND	µg/kg (wet wt)	4
Heptachlor	ND	µg/kg (wet wt)	4
Aldrin	ND	µg/kg (wet wt)	4
Heptachlor epoxide	ND	µg/kg (wet wt)	4
Endosulfan I	ND	µg/kg (wet wt)	4
Dieldrin	ND	µg/kg (wet wt)	8
4,4'-DDE	ND	µg/kg (wet wt)	8
Endrin	ND	µg/kg (wet wt)	8
Endosulfan II	ND	µg/kg (wet wt)	8
4,4'-DDD	ND	µg/kg (wet wt)	8
Endosulfan sulfate	ND	µg/kg (wet wt)	8
4,4'-DDT	ND	µg/kg (wet wt)	8
Endrin ketone	ND	µg/kg (wet wt)	8
Methoxychlor	ND	µg/kg (wet wt)	40
Chlordane	ND	µg/kg (wet wt)	40
Toxaphene	ND	µg/kg (wet wt)	80
Aroclor-1016	ND	µg/kg (wet wt)	40
Aroclor-1221	ND	µg/kg (wet wt)	40
Aroclor-1232	ND	µg/kg (wet wt)	40
Aroclor-1242	ND	µg/kg (wet wt)	40
Aroclor-1248	ND	µg/kg (wet wt)	40
Aroclor-1254	ND	µg/kg (wet wt)	40
Aroclor-1260	ND	µg/kg (wet wt)	40

Solid content = 100%

NA = Not applicable.

ND = Not detected.

Reported by LT   Approved by EG

HAZARDOUS SUBSTANCE LIST (HSL)
PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080/HSL List

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)

Client ID: Laboratory Control Spike

Laboratory ID: 0592-04BS

Matrix: Solid Sampled: NA Received: NA

Authorized: NA Prepared: 09/07/88 Analyzed: 09/29/88

Parameter	Result**	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	4
beta-BHC	ND	µg/kg (dry wt)	4
delta-BHC	ND	µg/kg (dry wt)	4
gamma-BHC (Lindane)	ND (48)	µg/kg (dry wt)	4
Heptachlor	ND (44)	µg/kg (dry wt)	4
Aldrin	ND (47)	µg/kg (dry wt)	4
Heptachlor epoxide	ND	µg/kg (dry wt)	4
Endosulfan I	ND	µg/kg (dry wt)	4
Dieldrin	8.4 (50)	µg/kg (dry wt)	8
4,4'-DDE	ND	µg/kg (dry wt)	8
Endrin	8.0 (48)	µg/kg (dry wt)	8
Endosulfan II	ND	µg/kg (dry wt)	8
4,4'-DDD	ND	µg/kg (dry wt)	8
Endosulfan sulfate	ND	µg/kg (dry wt)	8
4,4'-DDT	ND (40)	µg/kg (dry wt)	8
Endrin aldehyde	ND	µg/kg (dry wt)	8
Methoxychlor	ND	µg/kg (dry wt)	40
Chlordane	ND	µg/kg (dry wt)	40
Toxaphene	ND	µg/kg (dry wt)	80
Aroclor-1016	ND	µg/kg (dry wt)	40
Aroclor-1221	ND	µg/kg (dry wt)	40
Aroclor-1232	ND	µg/kg (dry wt)	40
Aroclor-1242	ND	µg/kg (dry wt)	40
Aroclor-1248	ND	µg/kg (dry wt)	40
Aroclor-1254	ND	µg/kg (dry wt)	80
Aroclor-1260	ND	µg/kg (dry wt)	80

Solid content = 100%

**Value in parentheses represents percent spike recovery.

NA = Not applicable.

ND = Not detected.

Reported by ALF Approved by EK

HAZARDOUS SUBSTANCE LIST (HSL)
PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080/HSL List

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike Dup.
Laboratory ID: 0592-04BSD
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 09/07/88 Analyzed: 09/29/88

Parameter	Result**	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	4
beta-BHC	ND	µg/kg (dry wt)	4
delta-BHC	ND	µg/kg (dry wt)	4
gamma-BHC (Lindane)	ND (56)	µg/kg (dry wt)	4
Heptachlor	ND (53)	µg/kg (dry wt)	4
Aldrin	ND (59)	µg/kg (dry wt)	4
Heptachlor epoxide	ND	µg/kg (dry wt)	4
Endosulfan I	ND	µg/kg (dry wt)	4
Dieldrin	10 (61)	µg/kg (dry wt)	8
4,4'-DDE	ND	µg/kg (dry wt)	8
Endrin	9.5 (57)	µg/kg (dry wt)	8
Endosulfan II	ND	µg/kg (dry wt)	8
4,4'-DDD	ND	µg/kg (dry wt)	8
Endosulfan sulfate	ND	µg/kg (dry wt)	8
4,4'-DDT	8.0 (48)	µg/kg (dry wt)	8
Endrin aldehyde	ND	µg/kg (dry wt)	8
Methoxychlor	ND	µg/kg (dry wt)	40
Chlordane	ND	µg/kg (dry wt)	40
Toxaphene	ND	µg/kg (dry wt)	80
Aroclor-1016	ND	µg/kg (dry wt)	40
Aroclor-1221	ND	µg/kg (dry wt)	40
Aroclor-1232	ND	µg/kg (dry wt)	40
Aroclor-1242	ND	µg/kg (dry wt)	40
Aroclor-1248	ND	µg/kg (dry wt)	40
Aroclor-1254	ND	µg/kg (dry wt)	80
Aroclor-1260	ND	µg/kg (dry wt)	80

Solid content = 100%

**Value in parentheses represents percent spike recovery.

NA = Not applicable.

ND = Not detected.

Reported by MEF Approved by EK

HAZARDOUS SUBSTANCE LIST (HSL)
PRIORITY POLLUTANT PESTICIDES/PCB

EPA Method 8080/HSL List

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)

Client ID: Laboratory Control Spike

Laboratory ID: 0592-04BS

Matrix: Solid Sampled: NA Received: NA

Authorized: NA Prepared: 09/07/88 Analyzed: 09/29/88

Parameter	% Recovery	QC Advisory Limits
Lindane	48	46 - 127%
Heptachlor	44	35 - 130%
Aldrin	47	34 - 132%
Dieldrin	50	31 - 134%
Endrin	48	42 - 139%
P.P.'-DDT	40	23 - 134%

NA = Not applicable.

Reported by HEF Approved by EK

HAZARDOUS SUBSTANCE LIST (HSL)
PRIORITY POLLUTANT PESTICIDES/PCB

EPA Method 8080/HSL List

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike Dup.
Laboratory ID: 0592-04BSD
Matrix: Solid   Sampled: NA   Received: NA
Authorized: NA   Prepared: 09/07/88   Analyzed: 09/29/88

Parameter	% Recovery	QC Advisory Limits
Lindane	56	46 - 127%
Heptachlor	53	35 - 130%
Aldrin	59	34 - 132%
Dieldrin	61	31 - 134%
Endrin	57	42 - 139%
P.P.'-DDT	48	23 - 134%

NA = Not applicable.

Reported by MEF   Approved by EK

PETROLEUM HYDROCARBON ANALYSIS BY IR

EPA Method 418.1

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Erco Blank
Laboratory ID: 1252-01B
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 10/11/88 Analyzed: 10/18/88

Parameter	Result	Units	Reporting Limit
Petroleum hydrocarbon	ND	µg/g (dry wt)	40

Solid content = 100%

NA = Not applicable.

ND = Not detected.

Reported by Kmi Approved by mm

PETROLEUM HYDROCARBON ANALYSIS BY IR

EPA Method 418.1

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike
Laboratory ID: 1041-10BS
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 09/30/88 Analyzed: 10/14/88

Parameter	Result**	Units	Reporting Limit
Petroleum hydrocarbon ----------	180 (90)	µg/g (dry wt)	40

Solid content = 100%

**Value in parentheses represents percent spike recovery.

NA = Not applicable.

Reported by HC Approved by mm

PETROLEUM HYDROCARBON ANALYSIS BY IR

EPA Method 418.1

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)

Client ID: Laboratory Control Spike Dup.

Laboratory ID: 1041-10BSD

Matrix: Solid Sampled: NA Received: NA

Authorized: NA Prepared: 09/30/88 Analyzed: 10/14/88

Parameter	Result**	Units	Reporting Limit
Petroleum hydrocarbon ----------	140 (71)	µg/g (dry wt)	40

Solid content = 100%

**Value in parentheses represents percent spike recovery.

NA = Not applicable.

Reported by HC Approved by MM

PETROLEUM HYDROCARBONS ANALYSIS BY IR

EPA Method 418.1

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike
Laboratory ID: 1041-10BS

Matrix:	Solid	Sampled:	NA	Received:	NA
Authorized:	NA	Prepared:	09/30/88	Analyzed:	10/14/88

Parameter	% Recovery	QC Advisory Limits
Petroleum hydrocarbons	90	48 - 110%

NA = Not applicable.

Reported by HC

Approved by MM

PETROLEUM HYDROCARBONS ANALYSIS BY IR

EPA Method 418.1

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike Dup.
Laboratory ID: 1041-10BSD
Matrix: Solid   Sampled: NA   Received: NA
Authorized: NA   Prepared: 09/30/88   Analyzed: 10/14/88

Parameter	% Recovery	QC Advisory Limits
Petroleum hydrocarbons	71	48 - 110%

NA = Not applicable.

Reported by HC   Approved by mm

HYDROCARBON FINGERPRINTING

Modified ASTM Method D3328

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Erco Blank
Laboratory ID: 1252-01B
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 10/12/88 Analyzed: 10/16/88

Parameter	Result	Reporting Limit for Individual Hydrocarbon	Reporting Limit for Total Product	Percent Solids	Units
Total hydrocarbons	ND	0.25	10.0	100	μg/g (dry wt)

Qualitative Identification: NA

NA = Not applicable.

ND = Not detected at or above reporting limit.

All samples are corrected for the method blank.

Minimum reporting limit for individual hydrocarbons = 0.25 μg/g (dry wt).

Minimum reporting limit for total products = 10.0 μg/g (dry wt).

Internal standard recovery = 88%.

Reported by BL Approved by MM

HYDROCARBON FINGERPRINTING

Modified ASTM Method D3328

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)

Client ID: Laboratory Control Spike

Laboratory ID: 1118-02BS

Matrix: Solid Sampled: NA Received: NA

Authorized: NA Prepared: 10/03/88 Analyzed: 10/09/88

Parameter	% Recovery	QC Advisory Limits
ortho-Terphenyl	99	60 - 120%
Fuel Oil No. 2	86	60 - 120%

NA = Not applicable.

Reported by BL

Approved by MM

HYDROCARBON FINGERPRINTING

Modified ASTM Method D3328

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike Dup.
Laboratory ID: 1118-02BSD
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 10/03/88 Analyzed: 10/09/88

Parameter	% Recovery	QC Advisory Limits
ortho-Terphenyl	100	60 - 120%
Fuel Oil No. 2	99	60 - 120%

NA = Not applicable.

Reported by ____________ Approved by ____________

EP TOXICITY METALS

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: EP Toxicity Blank 7-3
Laboratory ID: EP Toxicity Blank 7-3
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 10/17/88 Analyzed: 10/24/88

Parameter	Result in Leachate	Units	Reporting Limit	Regulated Limit in Leachate	Analytical Method
Arsenic	ND	mg/L	0.5	5	200.7
Barium	ND	mg/L	0.1	100	200.7
Cadmium	ND	mg/L	0.05	1	200.7
Chromium	ND	mg/L	0.1	5	200.7
Lead	ND	mg/L	0.5	5	200.7
Mercury	ND	mg/L	0.002	0.2	245.1
Selenium	ND	mg/L	0.05	1	270.2
Silver	ND	mg/L	0.05	5	200.7

NA = Not applicable.

ND = Not detected.

Reported by ______ Approved by ______

HALEY & ALDRICH, INC.
238 Main Street, Cambridge, MA 02142
Tel 617/492-6460

1307 CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

H&A FILE NO. 1 0003-41
PROJECT PARCEL 1B / MBTA
H&A CONTACT Kleo Taliadouros

LABORATORY ENSECO
ADDRESS Alewife Brook Pkwy CAMBRIDGE
CONTACT

DELIVERY DATE 13 OCT 88
DATE FINAL REPORT DUE 2 WEEKS
PROJECT MANAGER'S INITIALS Joe Campisi

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID	O & C	TPH by IR	CYANIDE			NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
B3-S7		7 OCT 88	N/A	18'-20'	SOIL	✓	✓	✓		✓		✓	✓			4	

I. Sampled and Relinquished by
Sign Terry A Townsend
Print Terry A. Townsend
Firm H&A
Date 10/13/88 Time 10:10

I. Received by
Sign David M. Bois
Print David M. Bois
Firm H&A
Date 13 OCT 88 Time 1040

II. Relinquished by
Sign David M. Bois
Print David M. Bois
Firm H & A
Date 13 OCT 88 Time 1105

II. Received by
Sign Vernes hammack
Print HAMMACK, VERNES
Firm ENSECO/ERCO
Date 101388 Time 1105

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☐ No ☐ Yes

If Yes, explain in remarks.

		VOA	ABN	METALS	PEST/PCB	PET. ID	O & C	TPH by IR	CYANIDE		
LIQUID	VOA Vial										
	Glass Bottle										
	Plastic Bottle										
	Preservative										
	Container Volume										
SOLID	VOA Vial	✓									
	Glass Jar		✓	✓		✓		✓	✓		
	Plastic Jar										
	Preservative	A	A	A		A		A	A		
	Container Volume	40 ml	5 oz	5 oz		5 oz		5 oz	5 oz		

Note: Sample bottles supplied by lab, unless indicated.

PRESERVATION KEY: A - Sample chilled,
B - Filtered, C - Acidified with ______
D - NaOH, E - NaThiosulfate, F - Other

REMARKS: (Sample storage, nonstandard sample bottles)

METALS EP TOX

Erco Laboratory

Enseco

November 8, 1988

RECEIVED
NOV 9 1988
HALEY & ALDRICH, INC.

Mr. Kleo Taliadouros
Haley & Aldrich, Inc.
58 Charles Street
Cambridge, MA 02164

Dear Kleo:

Enclosed are the results of the analyses performed on the one soil sample for Parcel 18/MBTA (Project No. 10003-41). This project was received under chain of custody at Enseco - Erco Laboratory on October 13, 1988, and was processed for a three-week turnaround time. A brief description of the Quality Assurance/Quality Control and methods employed by Enseco are contained within the report. This letter authorizes the release of the analytical results and should be considered an integral part of this report.

Please refer to this project by the Erco Laboratory Identification No. 1307 to help expedite any future discussions. We will be happy to answer any questions or concerns that you may have.

Sincerely,

Ed Dowling /ADW

Edward Dowling
Client Service Representative

Dallas Wait

A. Dallas Wait,, Ph.D.
Technical Director

Encl.

Enseco Incorporated
205 Alewife Brook Parkway

ANALYTICAL RESULTS

ANALYTICAL RESULTS

The method number provided on each data report sheet refers to a publication originating from a regulatory or standard-setting organization. In general, the methods employed are those specified by the U.S. Environmental Protection Agency and other state and federal agencies. In cases where an approved regulatory method does not exist, a method developed by Enseco will be employed to meet the specific needs of the client. The methods commonly employed by Enseco are based on methods from the following references.

U.S. Environmental Protection Agency. 1983. Methods for chemical analysis of water and wastes. EPA-600/4-79-020. Cincinnati, OH, March.

U.S. Environmental Protection Agency. 1984. Test methods for evaluating solid waste, physical/chemical methods. (SW-846); Washington, D.C. April.

U.S. Environmental Protection Agency. 1986. Methods for the determination of organic compounds in finished drinking water and raw source water. Cincinnati, OH, September.

"Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act," 40 CFR, Part 136; Federal Register, Vol. 49, No. 209 (1984).

American Public Health Association, American Water Works Association, Water Pollution Control Federation. 1985. Standard methods for the examination of water and wastewater, 16th Edition. Washington, D.C., April.

Current EPA Contract Laboratory Program (CLP) protocols for the analysis of organic and inorganic hazardous substances including chlorinated dioxins and furans.

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: Haley & Aldrich, Inc. (Job No. 0100341)
Client ID: BS-S7
Laboratory ID: 1307-01

Matrix:	Solid	Sampled:	10/07/88	Received:	10/13/88
Authorized:	10/13/88	Prepared:	10/17/88	Analyzed:	10/19/88

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	1,100
Bromomethane	ND	µg/kg (dry wt)	1,100
Vinyl chloride	ND	µg/kg (dry wt)	1,100
Chloroethane	ND	µg/kg (dry wt)	1,100
Methylene chloride	ND	µg/kg (dry wt)	2,800
Acetone	ND	µg/kg (dry wt)	2,800
Carbon disulfide	ND	µg/kg (dry wt)	560
1,1-Dichloroethene	ND	µg/kg (dry wt)	560
1,1-Dichloroethane	ND	µg/kg (dry wt)	560
1,2-Dichloroethene (total)	ND	µg/kg (dry wt)	560
Chloroform	ND	µg/kg (dry wt)	560
1,2-Dichloroethane	ND	µg/kg (dry wt)	560
2-Butanone	ND	µg/kg (dry wt)	1,100
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	560
Carbon tetrachloride	ND	µg/kg (dry wt)	560
Vinyl acetate	ND	µg/kg (dry wt)	1,100
Bromodichloromethane	ND	µg/kg (dry wt)	560
1,2-Dichloropropane	ND	µg/kg (dry wt)	560
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	560
Trichloroethene	ND	µg/kg (dry wt)	560
Dibromochloromethane	ND	µg/kg (dry wt)	560
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	560
Benzene	ND	µg/kg (dry wt)	560
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	560
Bromoform	ND	µg/kg (dry wt)	560
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	1,100
2-Hexanone	ND	µg/kg (dry wt)	1,100
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	560
Tetrachloroethene	ND	µg/kg (dry wt)	560
Toluene	ND	µg/kg (dry wt)	560
Chlorobenzene	ND	µg/kg (dry wt)	560
Ethylbenzene -----------------	1,800	µg/kg (dry wt)	560
Styrene	ND	µg/kg (dry wt)	560
Xylene (total) ---------------	7,400	µg/kg (dry wt)	560

Solid content = 90%

ND = Not detected.

Reported by CL Approved by

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: B3-S7
Laboratory ID: 1307-01
Matrix: Solid Sampled: 10/07/88 Received: 10/13/88
Authorized: 10/13/88 Prepared: 10/20/88 Analyzed: 11/04/88

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	370
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	370
2-Chlorophenol	ND	µg/kg (dry wt)	370
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	370
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	370
Benzyl alcohol	ND	µg/kg (dry wt)	370
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	370
2-Methylphenol	ND	µg/kg (dry wt)	370
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	370
4-Methylphenol	ND	µg/kg (dry wt)	370
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	370
Hexachloroethane	ND	µg/kg (dry wt)	370
Nitrobenzene	ND	µg/kg (dry wt)	370
Isophorone	ND	µg/kg (dry wt)	370
2-Nitrophenol	ND	µg/kg (dry wt)	370
2,4-Dimethylphenol	ND	µg/kg (dry wt)	370
Benzoic acid	ND	µg/kg (dry wt)	1,900
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	370
2,4-Dichlorophenol	ND	µg/kg (dry wt)	370
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	370
Naphthalene	ND	µg/kg (dry wt)	370
4-Chloroaniline	ND	µg/kg (dry wt)	370
Hexachlorobutadiene	ND	µg/kg (dry wt)	370
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	370
2-Methylnaphthalene	ND	µg/kg (dry wt)	370
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	370
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	370
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	1,900
2-Chloronaphthalene	ND	µg/kg (dry wt)	370
2-Nitroaniline	ND	µg/kg (dry wt)	1,900
Dimethyl phthalate	ND	µg/kg (dry wt)	370
Acenaphthylene	ND	µg/kg (dry wt)	370
3-Nitroaniline	ND	µg/kg (dry wt)	1,900
Acenaphthene	ND	µg/kg (dry wt)	370

(continued on following page)

ND = Not detected.

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)

Client ID: B3-S7

Laboratory ID: 1307-01

Matrix: Solid Sampled: 10/07/88 Received: 10/13/88

Authorized: 10/13/88 Prepared: 10/20/88 Analyzed: 11/04/88

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	1,900
4-Nitrophenol	ND	µg/kg (dry wt)	1,900
Dibenzofuran	ND	µg/kg (dry wt)	370
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	370
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	370
Diethyl phthalate	ND	µg/kg (dry wt)	370
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	370
Fluorene	ND	µg/kg (dry wt)	370
4-Nitroaniline	ND	µg/kg (dry wt)	1,900
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	1,900
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	370
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	370
Hexachlorobenzene	ND	µg/kg (dry wt)	370
Pentachlorophenol	ND	µg/kg (dry wt)	1,900
Phenanthrene	ND	µg/kg (dry wt)	370
Anthracene	ND	µg/kg (dry wt)	370
Di-n-butyl phthalate	ND	µg/kg (dry wt)	370
Fluoranthene	ND	µg/kg (dry wt)	370
Pyrene	ND	µg/kg (dry wt)	370
Butyl benzyl phthalate	ND	µg/kg (dry wt)	370
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	750
Benzo(a)anthracene	ND	µg/kg (dry wt)	370
bis(2-Ethylhexyl)phthalate	ND	µg/kg (dry wt)	370
Chrysene	ND	µg/kg (dry wt)	370
Di-n-octyl phthalate	ND	µg/kg (dry wt)	370
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	370
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	370
Benzo(a)pyrene	ND	µg/kg (dry wt)	370
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	370
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	370
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	370

Solid content = 87%

ND = Not detected.

Reported by JC Approved by cB

PETROLEUM HYDROCARBON ANALYSIS BY IR

EPA Method 418.1

Client Name:	Haley & Aldrich, Inc. (Job No. 1000341)				
Client ID:	B~~S~~-3S7				
Laboratory ID:	1307-01				
Matrix:	Solid	Sampled:	10/07/88	Received:	10/13/88
Authorized:	10/13/88	Prepared:	10/19/88	Analyzed:	11/01/88

Parameter	Result	Units	Reporting Limit
Petroleum hydrocarbon	ND	µg/g (dry wt)	40

Solid content = 90%

ND = Not detected.

Reported by Km Approved by Bc

HYDROCARBON FINGERPRINTING

Modified ASTM Method D3328

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: B~~S~~3-S7
Laboratory ID: 1307-01
Matrix: Solid Sampled: 10/07/88 Received: 10/13/88
Authorized: 10/13/88 Prepared: 11/03/88 Analyzed: 11/03/88

Parameter	Result	Reporting Limit for Individual Hydrocarbon	Reporting Limit for Total Product	Percent Solids	Units
Total hydrocarbons	ND	0.25	10.0	89	µg/g (dry wt)

Qualitative Identification: NA

NA = Not applicable.

ND = Not detected at or above reporting limit.

All samples are corrected for the method blank.

Minimum reporting limit for individual hydrocarbons = 0.25 µg/g (dry wt).

Minimum reporting limit for total products = 10.0 µg/g (dry wt).

Internal standard recovery = 98%.

Reported by Bc Approved by mm

EP TOXICITY METALS

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: BS-S7
Laboratory ID: 1307-01
Matrix: Solid   Sampled: 10/07/88   Received: 10/13/88
Authorized: 10/13/88   Prepared: 10/17/88   Analyzed: 10/24/88

Parameter	Result in Leachate	Units	Reporting Limit	Regulated Limit in Leachate	Analytical Method
Arsenic	ND	mg/L	0.5	5	200.7
Barium	ND	mg/L	0.1	100	200.7
Cadmium	ND	mg/L	0.05	1	200.7
Chromium	ND	mg/L	0.1	5	200.7
Lead	ND	mg/L	0.5	5	200.7
Mercury	ND	mg/L	0.002	0.2	245.1
Selenium	ND	mg/L	0.05	1	270.2
Silver	ND	mg/L	0.05	5	200.7

ND = Not detected.

Reported by ____________   Approved by ____________

Enseco

CLIENT: Haley & Aldrich, Inc. (Job No. 1000341)
SAMPLE RECEIVED: 10/13/88
REPORT COMPLETED: 11/07/88
RESULTS IN: as indicated
REPORTED BY: LB
CHECKED BY: MD

INORGANIC ANALYSIS

- Data Report -

Erco ID	Client ID	Solids, Total (%)
1307-01	B~~8~~3-S7	86.3
Erco Blank		NA
Laboratory Control Spike		NA
Laboratory Control Spike Dup.		NA

Reporting Limit: NA

Method Used: 160.3

If customer has any questions regarding analysis, refer to sample in question by its Erco ID#.

NA = Not applicable.

CLIENT: Haley & Aldrich, Inc. (Job No. 1000341)

SAMPLE RECEIVED: 10/13/88

REPORT COMPLETED: 11/04/88

RESULTS IN: mg/kg (ppm)

REPORTED BY: Arnold Greene Testing Laboratories

CHECKED BY: ED

INORGANIC ANALYSIS

- Data Report -

Erco ID	Client ID	Cyanide, Total
1307-01	B3-S7	<0.7

If customer has any questions regarding analysis, refer to sample in question by its Erco ID#.

QUALITY ASSURANCE/QUALITY CONTROL

QUALITY ASSURANCE/QUALITY CONTROL

As an indication of the overall quality of the data generated by Enseco - Erco Laboratory for this report, the following controls have been provided (when applicable).

Reagent or analytical blanks are analyzed to assess the level of contamination which exists in the analytical system. An analytical blank, analyzed with every batch of samples, consists of reagents specific to the method. This blank is carried through every aspect of the procedure, including preparation, cleanup, and analysis. Ideally, the concentration of an analyte in the blank is below the reporting limit for that analyte. However, some common laboratory solvents and metals are difficult to eliminate to the part-per-billion levels commonly reported in environmental analyses. Therefore, analytical data are corrected for blank contamination before they are reported to the client.

Laboratory control samples (LCS) are used to monitor the laboratory's day-to-day performance of routine analytical methods. An LCS consists of a standard, control matrix which is spiked with a group of target compounds representative of the method analytes. The LCS is analyzed with environmental samples to provide evidence that the laboratory is performing the method within accepted QC guidelines.

An LCS has been established for most routine analytical methods. Reagent water is used as the control matrix for the analysis of aqueous samples. The LCS compounds are spiked into reagent water and carried through the appropriate steps of the analysis. As stated in SW-846 (third edition), a universal blank matrix does not exist for solid samples and therefore no matrix is used. The LCS for solid samples consists of the LCS compounds spiked into a reagent blank and carried through the appropriate steps of the analysis. The data thus obtained are used to set the LCS control limits. As sufficient laboratory data become available, the control limits are redefined based upon the most recent six months of LCS data. Control limits for accuracy are based on the historical average recovery of the LCS plus or minus three standard deviation units.

Surrogates are organic compounds that are similar to the analytes of interest in chemical behavior but which are not normally found in environmental samples. Enseco routinely adds surrogates to samples requiring GS/MS analysis and reports these surrogate recoveries to the client. These surrogates are added to samples to monitor the effect of the matrix on the accuracy of the analysis. Results are reported in terms of percent recovery.

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: Haley & Aldrich, Inc. (Job No. 0100341)
Client ID: Erco Procedural Blank - Methanol
Laboratory ID: T998B
Matrix: Aqueous Sampled: NA Received: NA
Authorized: NA Prepared: 10/19/88 Analyzed: 10/19/88

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	250
Bromomethane	ND	µg/L	250
Vinyl chloride	ND	µg/L	250
Chloroethane	ND	µg/L	250
Methylene chloride	ND	µg/L	620
Acetone	ND	µg/L	620
Carbon disulfide	ND	µg/L	120
1,1-Dichloroethene	ND	µg/L	120
1,1-Dichloroethane	ND	µg/L	120
1,2-Dichloroethene (total)	ND	µg/L	120
Chloroform	ND	µg/L	120
1,2-Dichloroethane	ND	µg/L	120
2-Butanone	ND	µg/L	250
1,1,1-Trichloroethane	ND	µg/L	120
Carbon tetrachloride	ND	µg/L	120
Vinyl acetate	ND	µg/L	250
Bromodichloromethane	ND	µg/L	120
1,2-Dichloropropane	ND	µg/L	120
cis-1,3-Dichloropropene	ND	µg/L	120
Trichloroethene	ND	µg/L	120
Dibromochloromethane	ND	µg/L	120
1,1,2-Trichloroethane	ND	µg/L	120
Benzene	ND	µg/L	120
trans-1,3-Dichloropropene	ND	µg/L	120
Bromoform	ND	µg/L	120
4-Methyl-2-pentanone	ND	µg/L	250
2-Hexanone	ND	µg/L	250
1,1,2,2-Tetrachloroethane	ND	µg/L	120
Tetrachloroethene	ND	µg/L	120
Toluene	ND	µg/L	120
Chlorobenzene	ND	µg/L	120
Ethylbenzene	ND	µg/L	120
Styrene	ND	µg/L	120
Xylene (total)	ND	µg/L	120

NA = Not applicable.

ND = Not detected.

Reported by CL Approved by WLK

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA Method 624 + 624/HSL List

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 0100341)

Client ID: Laboratory Control Spike

Laboratory ID: T999LCS

Matrix: Aqueous Prepared: 10/19/88 Analyzed: 10/19/88

Parameter	% Recovery	QC Advisory Limits
1,1-Dichloroethene	89	61 - 145%
Trichloroethene	93	71 - 120%
Benzene	95	76 - 127%
Toluene	91	76 - 125%
Chlorobenzene	91	75 - 130%

Reported by CL Approved by

Enseco

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA Method 624 + 624/HSL List

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 0100341)
Client ID: Laboratory Control Spike Dup.
Laboratory ID: U001LCSD
Matrix: Aqueous Prepared: 10/19/88 Analyzed: 10/19/88

Parameter	% Recovery	QC Advisory Limits
1,1-Dichloroethene	85	61 - 145%
Trichloroethene	91	71 - 120%
Benzene	90	76 - 127%
Toluene	87	76 - 125%
Chlorobenzene	91	75 - 130%

Reported by CL Approved by wHc

VOLATILE ORGANICS

Surrogate Recovery Summary

Client Name: Haley & Aldrich, Inc. (Job No. 0100341)
Matrix: Solid
Authorized: 10/13/88 Received: 10/13/88

		Surrogate Compound (%)		
Erco ID	Client ID	d_4-1,2,-Dichloroethane	d_8-Toluene	p-Bromofluorobenzene
1307-01	BS-S7	97	107	110
T998B	Erco Procedural Blank - Methanol	91	102	101
QC Advisory Limits:		70-121%	81-117%	74-121%

Reported by cL Approved by WItz

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Erco Blank
Laboratory ID: 1307-01B
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 10/20/88 Analyzed: 11/03/88

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	330
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	330
2-Chlorophenol	ND	µg/kg (dry wt)	330
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	330
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	330
Benzyl alcohol	ND	µg/kg (dry wt)	330
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	330
2-Methylphenol	ND	µg/kg (dry wt)	330
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	330
4-Methylphenol	ND	µg/kg (dry wt)	330
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	330
Hexachloroethane	ND	µg/kg (dry wt)	330
Nitrobenzene	ND	µg/kg (dry wt)	330
Isophorone	ND	µg/kg (dry wt)	330
2-Nitrophenol	ND	µg/kg (dry wt)	330
2,4-Dimethylphenol	ND	µg/kg (dry wt)	330
Benzoic acid	ND	µg/kg (dry wt)	1,700
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	330
2,4-Dichlorophenol	ND	µg/kg (dry wt)	330
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	330
Naphthalene	ND	µg/kg (dry wt)	330
4-Chloroaniline	ND	µg/kg (dry wt)	330
Hexachlorobutadiene	ND	µg/kg (dry wt)	330
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	330
2-Methylnaphthalene	ND	µg/kg (dry wt)	330
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	330
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	330
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	1,700
2-Chloronaphthalene	ND	µg/kg (dry wt)	330
2-Nitroaniline	ND	µg/kg (dry wt)	1,700
Dimethyl phthalate	ND	µg/kg (dry wt)	330
Acenaphthylene	ND	µg/kg (dry wt)	330
3-Nitroaniline	ND	µg/kg (dry wt)	1,700
Acenaphthene	ND	µg/kg (dry wt)	330

(continued on following page)

NA = Not applicable.

ND = Not detected.

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)

Client ID: Erco Blank

Laboratory ID: 1307-01B

Matrix: Solid Sampled: NA Received: NA

Authorized: NA Prepared: 10/20/88 Analyzed: 11/03/88

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	1,700
4-Nitrophenol	ND	µg/kg (dry wt)	1,700
Dibenzofuran	ND	µg/kg (dry wt)	330
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	330
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	330
Diethyl phthalate	ND	µg/kg (dry wt)	330
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	330
Fluorene	ND	µg/kg (dry wt)	330
4-Nitroaniline	ND	µg/kg (dry wt)	1,700
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	1,700
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	330
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	330
Hexachlorobenzene	ND	µg/kg (dry wt)	330
Pentachlorophenol	ND	µg/kg (dry wt)	1,700
Phenanthrene	ND	µg/kg (dry wt)	330
Anthracene	ND	µg/kg (dry wt)	330
Di-n-butyl phthalate	ND	µg/kg (dry wt)	330
Fluoranthene	ND	µg/kg (dry wt)	330
Pyrene	ND	µg/kg (dry wt)	330
Butyl benzyl phthalate	ND	µg/kg (dry wt)	330
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	660
Benzo(a)anthracene	ND	µg/kg (dry wt)	330
bis(2-Ethylhexyl)phthalate	ND	µg/kg (dry wt)	330
Chrysene	ND	µg/kg (dry wt)	330
Di-n-octyl phthalate	ND	µg/kg (dry wt)	330
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	330
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	330
Benzo(a)pyrene	ND	µg/kg (dry wt)	330
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	330
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	330
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	330

Solid content = 100%

NA = Not applicable.

ND = Not detected.

Reported by Jc Approved by cB

PRIORITY POLLUTANT SEMIVOLATILE ORGANICS

EPA Method 8270 + 8270/HSL List

QUALITY CONTROL

Client Name:	Haley & Aldrich, Inc. (Job No. 1000341)				
Client ID:	Laboratory Control Spike				
Laboratory ID:	1084-07BS				
Matrix:	Solid	Sampled:	NA	Received:	NA
Authorized:	NA	Prepared:	09/28/88	Analyzed:	10/20/88

Parameter	% Recovery	QC Advisory Limits
2-Chlorophenol	109*	25 - 102%
Phenol	89	26 - 90%
4-Chloro-3-methylphenol	82	26 - 103%
4-Nitrophenol	84	11 - 114%
Pentachlorophenol	75	17 - 109%
1,4-Dichlorobenzene	75	26 - 104%
N-Nitroso-di-n-propylamine	86	41 - 126%
1,2,4-Trichlorobenzene	92	38 - 107%
Acenaphthene	83	31 - 137%
2,4-Dinitrotoluene	81	28 - 89%
Pyrene	130	35 - 142%

*Value is outside QC advisory limits.

NA = Not applicable.

Reported by A. 　　Approved by

PRIORITY POLLUTANT SEMIVOLATILE ORGANICS

EPA Method 8270 + 8270/HSL List

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike Dup.
Laboratory ID: 1084-07BSD
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 09/28/88 Analyzed: 10/20/88

Parameter	% Recovery	QC Advisory Limits
2-Chlorophenol	106*	25 - 102%
Phenol	82	26 - 90%
4-Chloro-3-methylphenol	76	26 - 103%
4-Nitrophenol	80	11 - 114%
Pentachlorophenol	77	17 - 109%
1,4-Dichlorobenzene	78	26 - 104%
N-Nitroso-di-n-propylamine	87	41 - 126%
1,2,4-Trichlorobenzene	86	38 - 107%
Acenaphthene	81	31 - 137%
2,4-Dinitrotoluene	79	28 - 89%
Pyrene	124	35 - 142%

*Value is outside QC advisory limits.

NA = Not applicable.

Reported by ____________ Approved by ____________

SEMIVOLATILE ORGANICS

Surrogate Recovery Summary

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Matrix: Solid
Authorized: 10/13/88 Received: 10/13/88

		Surrogate Compound (%)					
Erco ID	Client ID	2-Fluorophenol	d_5-Phenol	2,4,6-Tribromophenol	d_5-Nitrobenzene	2-Fluorobiphenyl	d_{14}-p-Terphenyl
1307-01	B3-S7	76	43	84	81	77	87
1307-01B	Erco Blank	84	52	96	97	89	100
	QC Advisory Limits:	26-121%	24-113%	18-122%	23-120%	30-115%	18-137%

Reported by JE Approved by CB

PETROLEUM HYDROCARBON ANALYSIS BY IR

EPA Method 418.1

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Erco Blank
Laboratory ID: 1278-01B
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 10/19/88 Analyzed: 10/25/88

Parameter	Result	Units	Reporting Limit
Petroleum hydrocarbon	ND	µg/g (dry wt)	40

Solid content = 100%

NA = Not applicable.

ND = Not detected.

Reported by hm Approved by Bl

PETROLEUM HYDROCARBON ANALYSIS BY IR

EPA Method 418.1

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike
Laboratory ID: 1177-04BS
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 10/06/88 Analyzed: 10/24/88

Parameter	Result**	Units	Reporting Limit
Petroleum hydrocarbon ----------	210 (105)	µg/g (dry wt)	40

Solid content = 100%

**Value in parentheses represents percent spike recovery.
NA = Not applicable.

Reported by KM Approved by BL

PETROLEUM HYDROCARBON ANALYSIS BY IR

EPA Method 418.1

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike Dup.
Laboratory ID: 1177-04BSD
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 10/06/88 Analyzed: 10/24/88

Parameter	Result**	Units	Reporting Limit
Petroleum hydrocarbon ----------	210 (105)	µg/g (dry wt)	40

Solid content = 100%

**Value in parentheses represents percent spike recovery.

NA = Not applicable.

Reported by km Approved by Bi

PETROLEUM HYDROCARBONS ANALYSIS BY IR

EPA Method 418.1

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike
Laboratory ID: 1177-04BS
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 10/06/88 Analyzed: 10/24/88

Parameter	% Recovery	QC Advisory Limits
Petroleum hydrocarbons	105	48 - 110%

NA = Not applicable.

Reported by hm Approved by

PETROLEUM HYDROCARBONS ANALYSIS BY IR

EPA Method 418.1

QUALITY CONTROL

Client Name:	Haley & Aldrich, Inc. (Job No. 1000341)				
Client ID:	Laboratory Control Spike Dup.				
Laboratory ID:	1177-048SD				
Matrix:	Solid	Sampled:	NA	Received:	NA
Authorized:	NA	Prepared:	10/06/88	Analyzed:	10/24/88

Parameter	% Recovery	QC Advisory Limits
Petroleum hydrocarbons	105	48 - 110%

NA = Not applicable.

Reported by KM Approved by BL

HYDROCARBON FINGERPRINTING

Modified ASTM Method D3328

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)

Client ID: Erco Blank

Laboratory ID: 1307-01B

Matrix: Solid Sampled: NA Received: NA

Authorized: NA Prepared: 11/03/88 Analyzed: 11/04/88

Parameter	Result	Reporting Limit for Individual Hydrocarbon	Reporting Limit for Total Product	Percent Solids	Units
Total hydrocarbons	ND	0.25	10.0	100	µg/g (dry wt)

Qualitative Identification: NA

NA = Not applicable.

ND = Not detected at or above reporting limit.

All samples are corrected for the method blank.

Minimum reporting limit for individual hydrocarbons = 0.25 µg/g (dry wt).

Minimum reporting limit for total products = 10.0 µg/g (dry wt).

Internal standard recovery = 96%.

Reported by Bc Approved by mm

HYDROCARBON FINGERPRINTING

Modified ASTM Method D3328

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike
Laboratory ID: 1118-02BS
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 10/03/88 Analyzed: 10/09/88

Parameter	% Recovery	QC Advisory Limits
ortho-Terphenyl	99	60 - 120%
Fuel Oil No. 2	86	60 - 120%

NA = Not applicable.

Reported by bc Approved by MM

HYDROCARBON FINGERPRINTING

Modified ASTM Method D3328

QUALITY CONTROL

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: Laboratory Control Spike Dup.
Laboratory ID: 1118-02BSD
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 10/03/88 Analyzed: 10/09/88

Parameter	% Recovery	QC Advisory Limits
ortho-Terphenyl	100	60 - 120%
Fuel Oil No. 2	99	60 - 120%

NA = Not applicable.

Reported by BC Approved by mm

EP TOXICITY METALS

Client Name: Haley & Aldrich, Inc. (Job No. 1000341)
Client ID: EP Toxicity Blank 7-3
Laboratory ID: EP Toxicity Blank 7-3
Matrix: Solid Sampled: NA Received: NA
Authorized: NA Prepared: 10/17/88 Analyzed: 10/24/88

Parameter	Result in Leachate	Units	Reporting Limit	Regulated Limit in Leachate	Analytical Method
Arsenic	ND	mg/L	0.5	5	200.7
Barium	ND	mg/L	0.1	100	200.7
Cadmium	ND	mg/L	0.05	1	200.7
Chromium	ND	mg/L	0.1	5	200.7
Lead	ND	mg/L	0.5	5	200.7
Mercury	ND	mg/L	0.002	0.2	245.1
Selenium	ND	mg/L	0.05	1	270.2
Silver	ND	mg/L	0.05	5	200.7

NA = Not applicable.

ND = Not detected.

Reported by VLP Approved by JDC

Haley & Aldrich, Inc.

CHAIN OF CUSTODY RECORD

PAGE OF

H&A FILE NO. 10003 41
PROJECT PARCEL 18
H&A CONTACT [illegible]

LABORATORY ESA
ADDRESS 43 Wiggins Road Bedford, MA
CONTACT Paul Uffucci

DELIVERY DATE 23 December 1988
DATE FINAL REPORT DUE [illegible]
PROJECT MANAGER'S NAME [illegible]

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	[illegible]	[illegible]			NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
B4-S11		[illegible]	1215	21'-23'	Soil	X		X				X				[illegible]	
B5-S6		[illegible]	1410	11'-12.5'	Soil	X	X	X	X	X		X				[illegible]	
B5 S2		[illegible]	1510	7'-9'	Soil	X	X	X				X				[illegible]	
B5-S7		[illegible]	1650	15'-16'	Soil	X		X	X	X		X				[illegible]	
B6 S8		21 Dec 88	815	16'-17'	Soil	X	X	X	X	X		X	X			[illegible]	
B6 S11		21 Dec 88	1000	21'-22'	Soil	X		X				X				[illegible]	

LIQUID	VOA Vial	X-	[illegible]								
	Glass Bottle										
	Plastic Bottle										
	Preservative	A	[illegible]								
	Container Volume										
SOLID	VOA Vial	X									
	Glass Jar		X	X	X	X		X	X		
	Plastic Jar										
	Preservative	A	A	A	A	A		A	A		
	Container Volume	40 ml	16 oz	16 oz	16 oz	16 oz		16 oz	16 oz		

Note: Sample bottles supplied by lab, unless indicated.

PRESERVATION KEY: A - Sample chilled, B - Filtered, C - Acidified with ________ D - NaOH, E - NaThiosulfate F - Other

REMARKS: (Sample storage, nonstandard sample bottles)

I. Sampled and Relinquished by
Sign [illegible]
Print [illegible]
Firm [illegible]
Date [illegible] Time 1200

I. Received by
Sign [illegible]
Print RICHARD K KENNAN
Firm ESA LABS
Date 12/23/88 Time 1200

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☐ No ☐ Yes

If Yes, explain in remarks.

esa Laboratories, Inc.

43 WIGGINS AVENUE
BEDFORD, MA. 01730
617-275-0100 • TELEX: 923344
TELECOPIER: (617) 275-5529

RECEIVED
JAN 23 1989
HALEY & ALDRICH, INC.

KLEO TALIADOUROS
HALEY & ALDRICH
58 CHARLES STREET
CAMBRIDGE, MA. 02142

ESAL Job No.: 885128
P.O. Number: 10003-41
Date Received: 12/23/88
Date Reported: 01/19/89

SUBJECT: PARCEL 18

Your samples which you submitted for analysis on 12/23/88 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Paul A. Ullucci

Paul A. Ullucci
Laboratory Director

Encl.

ESAL Job No. : 88-5128
Date Received: 12/23/88
Date Analyzed: 12-30-88

ESAL No. : 88-5128-001   Sample Desc:SOIL, 10003-41, B4-S11

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	108
Toluene-D8	76
Bromofluorobenzene	88

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 88-5128
P.O. No.: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 88-5128

Sample ID: Soil, 10003-41,B4-S11

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 88-5128
Date Received: 12/23/88
Date Analyzed: 12-30-88

ESAL No. : 88-5128-003 Sample Desc:SOIL, 10003-41, B4-S6

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	96
Toluene-D8	115
Bromofluorobenzene	94

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 88-5128
P.O. No.: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 88-5128

Sample ID: Soil, 10003-41,B4-S6

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 88-5128
Date Received: 12/23/88
Date Analyzed: 12-30-88

ESAL No. : 88-5128-005 Sample Desc:SOIL, 1003-41, B5-S4

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	103
Toluene-D8	125
Bromofluorobenzene	97

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 88-5128
P.O. No.: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 88-5128

Sample ID: Soil, 10003-41,B5-S4

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 88-5128
Date Received: 12/23/88
Date Analyzed: 12-30-88

ESAL No. : 88-5128-007 Sample Desc:SOIL, 10003-41, B5-S7

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	102
Toluene-D8	117
Bromofluorobenzene	95

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 88-5128
P.O. No.: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 88-5128

Sample ID: Soil, 10003-41,B5-S7

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-5128
Date Received: 12/23/88
Date Analyzed: 12-30-88

ESAL No. : 88-5128-009 Sample Desc:SOIL, 10003-41, B6-S8

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	6700
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	110
Toluene-D8	118
Bromofluorobenzene	93

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 88-5128
P.O. No.: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 88-5128

Sample ID: Soil, 10003-41,B6-S8

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	11000

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-5128
Date Received: 12/23/88
Date Analyzed: 12-30-88

ESAL No. : 88-5128-11 Sample Desc. :SOIL, 10003-41, B6-S11

Analyte	Result(ug/kg)
Benzene	3.2
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	128
Toluene-D8	117
Bromofluorobenzene	79

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 88-5128
P.O. No.: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 88-5128

Sample ID: Soil, 10003-41,B6-S11

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	21.5

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

esa

ESAL Job No. : 88-5128
Date Received: 12/23/88
Date Analyzed: 12-30-88

ESAL No. : MB1230R1 Sample Desc. : Water, Method Blank

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	22.3
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	15.2
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	93
Toluene-D8	99
Bromofluorobenzene	97

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 88-5128
P.O. No.: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 88-5128

Sample ID: Soil, Method Blank

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	20.5
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 88-5128
Date Received: 12/23/88
Date Analyzed: 12-30-88

ESAL No. : MB1230R1   Sample Desc. : Water, Method Blank

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	22.3
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	15.2
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	93
Toluene-D8	99
Bromofluorobenzene	97

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 88-5128
P.O. No.: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 88-5128

Sample ID: Soil, Method Blank

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	20.5
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

esa Laboratories, Inc.

43 WIGGINS AVENUE
BEDFORD, MA. 01730
617-275-0100 • TELEX: 923344
TELECOPIER: (617) 275-5529

Kleo Taliadouros
Haley & Aldrich
58 Charles Street
Cambridge, MA. 02142

ESAL Job No.: 890051
P.O. Number: 10003-41
Date Received: 01/06/89
Date Reported: 01/27/89

SUBJECT: Parcel 18

Your samples which you submitted for analysis on 01/06/89 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Paul A Ullucci

Paul A. Ullucci
Laboratory Director

Encl.

AN ESA COMPANY

Haley & Aldrich, Inc.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

H&A FILE NO. [illegible] 41
PROJECT [illegible]
H&A CONTACT [illegible]

LABORATORY [illegible]
ADDRESS 45 [illegible] Ave, [illegible]
CONTACT [illegible]

DELIVERY DATE [illegible]
DATE FINAL REPORT DUE [illegible]
PROJECT MANAGER'S NAME [illegible]

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	[illegible]				NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
B3-S5		1/3/87	–	9'-11'	soil	✓				✓						3	
[illegible]		1/3/87	–	15'-17'	soil				✓	✓						1	
[illegible]		1/3/87	–	24'-26'	soil	✓				✓						3	
[illegible] S3		[illegible]	~~[illegible]~~ 1400	~~[illegible]~~ 5-7'	soil				✓							1	
[illegible]		[illegible]	[illegible]	11'-13'	soil					✓						1	
[illegible]		[illegible]	[illegible]	17'-19'	soil	✓	✓		✓	✓		✓				3	
[illegible]		[illegible]	[illegible]	20'-22'	soil			✓	✓							1	
[illegible]		[illegible]	[illegible]	7'-9'	soil				✓	✓						1	
[illegible]		[illegible]	1030	15'-17'	soil	✓			✓	✓						3	
[illegible]		[illegible]	1045	20'-22'	soil				✓	✓						1	

I. Sampled and Relinquished by
Sign [illegible]
Print [illegible]
Firm H&A
Date [illegible] Time [illegible]

I. Received by
Sign [illegible]
Print [illegible]
Firm [illegible]
Date [illegible] Time [illegible]

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☐ No ☐ Yes

If Yes, explain in remarks

		VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	[illegible]			
LIQUID	VOA Vial										
	Glass Bottle										
	Plastic Bottle										
	Preservative										
	Container Volume										
SOLID	VOA Vial	✓									
	Glass Jar		✓	✓	✓	✓		✓			
	Plastic Jar										
	Preservative	A	A	A	A	A		A			
	Container Volume	40 ml	16 oz	16 oz	16 oz	16 oz		[illegible]			

Note: Sample bottles supplied by lab, unless indicated.

PRESERVATION KEY: A - Sample chilled, B - Filtered, C - Acidified with ______ D - NaOH, E - NaThiosulfate F - Other

REMARKS: (Sample storage, nonstandard sample bottles)

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Laboratory Number: 15.863-1
Sample Designation: 885192-02
Date Extracted: 01/06/89
Date Analyzed: 01/11/89
Matrix: Solid

HALEY AND ALDRICH JOB NO: 10003-41
Sample ID NO: B7-S9

Results expressed on an as received basis.

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
N-NITROSODIMETHYLAMINE	BDL	0.3
PHENOL	BDL	0.3
Bis (2-CHLOROETHYL) ETHER	BDL	0.3
2-CHLOROPHENOL	BDL	0.3
1.3-DICHLOROBENZENE	BDL	0.3
1.4-DICHLOROBENZENE	BDL	0.3
BENZYL ALCOHOL	BDL	0.3
1.2-DICHLOROBENZENE	BDL	0.3
2-METHYLPHENOL	BDL	0.3
Bis (2-CHLOROISOPROPYL) ETHER	BDL	0.3
4-METHYLPHENOL	BDL	0.3
HEXACHLOROETHANE	BDL	0.3
N-NITROSODI-N-PROPYLAMINE	BDL	0.3
NITROBENZENE	BDL	0.3
ISOPHORONE	BDL	0.3
2-NITROPHENOL	BDL	0.3
2.4-DIMETHYLPHENOL	BDL	0.3
BENZOIC ACID	BDL	1
Bis (2-CHLORETHOXY) METHANE	BDL	0.3
2.4-DICHLOROPHENOL	BDL	0.3
1.2.4-TRICHLOROBENZENE	BDL	0.3
NAPHTHALENE	BDL	0.3
4-CHLOROANILINE	BDL	0.3
HEXACHLOROBUTADIENE	BDL	0.3
4-CHLORO-3-METHYLPHENOL	BDL	0.3
2-METHYLNAPHTHALENE	BDL	0.3
HEXACHLOROCYCLOPENTADIENE	BDL	0.3
2.4.6-TRICHLOROPHENOL	BDL	0.3
2.4.5-TRICHLOROPHENOL	BDL	1
2-CHLORONAPHTHALENE	BDL	0.3
2-NITROANILINE	BDL	1
DIMETHYLPHTHALATE	BDL	0.3
ACENAPHTHYLENE	BDL	0.3
2.6-DINITROTOLUENE	BDL	0.3
3-NITROANILINE	BDL	1
ACENAPHTHENE	BDL	0.3
2.4-DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION LI (ug/g)
4-NITROPHENOL	BDL	1
DIBENZOFURAN	BDL	0.3
2.4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	BDL	0.3
4-NITROANILINE	BDL	1
4.6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	BDL	0.3
ANTHRACENE	BDL	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	BDL	0.3
BENZIDENE	BDL	2
PYRENE	BDL	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3.3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	BDL	0.3
CHRYSENE	BDL	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	BDL	0.3
BENZO(k)FLUORANTHENE	BDL	0.3
BENZO(a)PYRENE	BDL	0.3
IDENO(1.2.3-c.d)PYRENE	BDL	0.3
DIBENZO(a.h)ANTHRACENE	BDL	0.3
BENZO(g.h.i)PERYLENE	BDL	0.3

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: EPA SW 846. 2ND EDITION
METHOD 3550/3270

RAI

Resource Analysts, Inc.
Subsidiary of MILLIPORE
P.O. Box 778, One Lafayette Road
Hampton, N.H. 03842
(603) 926-7777

To:

Mr. Richard Keenan
ESA Laboratories
43 Wiggins Avenue
Bedford, MA 01730

P.O. Number: L881214

Date Received: 01/05/89 (1636)

Lab Number: 15,863

Date Reported: 01/17/89

Attached please find test results for acid/base/neutral extractable organic compounds.

HALEY AND ALDRICH JOB NO: 10003-41

Parameter: Total Cyanide (ug/g) Matrix: Solid
Date Analyzed: 01/02/89
Method/Reference: 335.2/40 CFR Part 136 Friday, October 26, 1984

Field Identification	Laboratory Number	Concentration
885192-04 B12-S8	15,863-2	<0.7
885192-07 B14-S8	15,863-3	<0.8

Results expressed on an as received basis.

David N Pease, President
Technical Director

Date

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-5192
P.O. Number: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/19/89

Sample Description: 88-5192-09

Sample ID: Soil, B14-S3

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	11.91	10
Aldrin	ND	10
Heptachlor Epoxide	12.58	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endrin Aldehyde	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-5192
P.O. Number: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/19/89

Sample Description: 88-5192-08

Sample ID: Soil, B14-S11

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endrin Aldehyde	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-5192
P.O. Number: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/19/89

Sample Description: 88-5192-07 Sample ID: Soil, B14-S8

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endrin Aldehyde	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-5192
P.O. Number: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/19/89

Sample Description: 88-5192-04

Sample ID: Soil, B12-S8

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endrin Aldehyde	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-5192
P.O. Number: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/19/89

Sample Description: 88-5192-02

Sample ID: Soil, B7-S9

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endrin Aldehyde	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-5192
P.O. Number: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/19/89

Sample Description: 88-5192-01

Sample ID: Soil, B7-S3

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	125	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	78	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endrin Aldehyde	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PETROLEUM IDENTIFICATION

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-5192
P.O. No. 10003-41
Date Received: 12/30/88
Date Analyzed: 01/04/89

REVISED REPORT - 01/24/89

	TEST DESCRIPTION	METHOD
(O&G):	OIL & GREASE - IR	EPA 413.2
(TPH):	PETROLEUM HC - IR	EPA 418.1
(PETROL. HC):	PETROLEUM HYDROCARBONS	GC-FID

SMP NO.	DESCRIPTION	O&G (MG/KG)	TPH (MG/KG)	PETROL. HC (MG/KG)	PET. ID
01	B7-S3	----	----	107	Highly weathered petroleum product
02	B7-S9	1300	900	7	*
04	B12-S8	----	----	19	*
07	B14-S8	320	50	1	Highly weathered petroleum product

*Heavier than #2 Fuel Oil, lighter than Motor Oil (? Weathered #4 Fuel Oil).

Sample Prep. EPA Method 9071

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadorous

ESAL Job No.: 885192
P.O. Number: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/04/89

Sample No.: 885192-2
Replicate

Sample ID: Soil,10003-41,
B7-S9

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	5	204.1
Arsenic	2.5	0.1	226.3
Beryllium	0.4	0.25	210.1
Cadmium	11	0.25	213.1
Chromium	11	2.5	218.1
Copper	ND	1.0	220.1
Lead	ND	2.5	239.1
Mercury	ND	0.1	245.1
Nickel	15	2	249.1
Selenium	ND	0.1	270.3
Silver	ND	0.5	272.1
Thallium	8	5	279.1
Zinc	21	0.25	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadorous

ESAL Job No.: 885192
P.O. Number: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/04/89

Sample No.: 885192-8

Sample ID: Soil,10003-41, B14-S11

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	5	204.1
Arsenic	3.2	0.1	226.3
Beryllium	0.4	0.25	210.1
Cadmium	ND	0.25	213.1
Chromium	17	2.5	218.1
Copper	15	1	220.1
Lead	ND	2.5	239.1
Mercury	0.1	0.1	245.1
Nickel	16	2	249.1
Selenium	ND	0.1	270.3
Silver	ND	0.5	272.1
Thallium	9	5	279.1
Zinc	25	0.25	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadorous

ESAL Job No.: 885192
P.O. Number: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/04/89

Sample No.: 885192-5

Sample ID: Soil,10003-41,
B12-S4

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	5	204.1
Arsenic	113	0.1	226.3
Beryllium	0.8	0.25	210.1
Cadmium	0.3	0.25	213.1
Chromium	24	2.5	218.1
Copper	375	1	220.1
Lead	1460	2.5	239.1
Mercury	2.1	0.1	245.1
Nickel	20	2	249.1
Selenium	0.7	0.1	270.3
Silver	1.5	0.5	272.1
Thallium	11	5	279.1
Zinc	243	0.25	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadorous

ESAL Job No.: 885192
P.O. Number: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/04/89

Sample No.: 885192-2

Sample ID: Soil,10003-41,
B7-S9

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	5	204.1
Arsenic	2.0	0.1	226.3
Beryllium	0.4	0.25	210.1
Cadmium	ND	0.25	213.1
Chromium	11	2.5	218.1
Copper	10	1.0	220.1
Lead	ND	2.5	239.1
Mercury	ND	0.1	245.1
Nickel	10	2	249.1
Selenium	ND	0.1	270.3
Silver	ND	0.5	272.1
Thallium	7	5	279.1
Zinc	17	0.25	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESAL Job No. : 88-5192
Date Received: 12-29-88
Date Analyzed: 01-03-89

Sample Description 516401MS   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1,1-Dichloroethylene	94	59-172
Trichloroethylene	112	62-137
Chlorobenzene	89	60-133
Toluene	111	59-139
Benzene	120	66-142

Method Volatile Organic Analysis, EPA Method 8240 (GC/MS)

Recovery limits are EPA CLP guidelines

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885192
P.O. No.: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/04/89

Sample No.: 885192

Sample ID: Soil,Method Blank

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	22.6
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/kg
ND = Nondetectable

ESAL Job No. : 88-5192
Date Received: 12/30/88
Date Analyzed: 01-03-89

ESAL No. : MB103R1 Sample Desc. : Soil, Method Blank

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	3.9
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	103
Toluene-D8	108
Bromofluorobenzene	98

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885192
P.O. No.: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/04/89

Sample No.: 885192-06

Sample ID: Soil,10003-41,B14-S8

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg
ND = Nondetectable

ESAL Job No. : 88-5192
Date Received: 12/30/88
Date Analyzed: 01-03-89

ESAL No. : 88-5192-06   Sample Desc:SOIL, 10003-41, B14-S8

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	118
Toluene-D8	99
Bromofluorobenzene	94

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885192
P.O. No.: 10003-41
Date Received: 12/30/88
Date Analyzed: 01/04/89

Sample No.: 885192-03

Sample ID: Soil,10003-41,B12-S8

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg
ND = Nondetectable

ESAL Job No. : 88-5192
Date Received: 12/30/88
Date Analyzed: 01-03-89

ESAL No. : 88-5192-03   Sample Desc:SOIL, 10003-41, B12-S8

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	110
Toluene-D8	101
Bromofluorobenzene	85

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/kg

esa

Kleo Taliadorous
Haley & Aldrich
58 Charles Street
Cambridge, MA. 02142

ESAL JOB NO.: 885192
DATE REC'D: 12/30/88
DATE REPORTED: 01/18/89

Your samples which you submitted for analysis on 12/30/88 have been processed. The results of the analyses are included.

If you have any questions concerning any of these data, please do not hesitate to call.

Paul Ullucci

Paul Ullucci
Technical Director

RECEIVED
JAN 26 1989
HALEY & ALDRICH, IN

Haley & Aldrich, Inc.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

H&A FILE NO. 10005-41
PROJECT Parcel 18
H&A CONTACT Kleo Taliadouros

LABORATORY ESA
ADDRESS 43 Wiggins Ave, Bedford, MA
CONTACT Reginald Gillan

DELIVERY DATE 30 Dec 88
DATE FINAL REPORT DUE Normal
PROJECT MANAGER'S NAME Joe Campisi

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID	O & C	PHC	Cyanide			NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
B7-S3		12-21-88	1345	5-7'	Soil				✓	X						1	
B7-S9		12-22-88	0940	17-19'	Soil		✓	✓	X	✓		✓				1	
B12-S8		12-27-88	1140	15'-17'	Soil	X			X	✓			X			3	
B12-S4		12-27-88	1025	7'-9'	Soil			X								1	
B14-S8		12-28-88	1040	15'-17'	Soil	✓			✓	✓		✓	X			3	
B14-S11		12-28-88	1120	22'-24'	Soil			X	✓							1	
B14-S3		12-28-88	0940	5'-7'	Soil				✓							1	

I. Sampled and Relinquished by
Sign Rosann Fickel
Print Rosann Fickel
Firm Haley & Aldrich
Date 12/30/88 Time 1500

I. Received by
Sign Richard R. Keenan
Print RICHARD R. KEENAN
Firm ESA LABS
Date 12/30/88 Time 1500

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☐ No ☐ Yes

If Yes, explain in remarks.

		VOA	ABN	METALS	PEST/PCB	PET. ID	O & C	PHC	Cyanide		
LIQUID	VOA Vial										
	Glass Bottle										
	Plastic Bottle										
	Preservative										
	Container Volume										
SOLID	VOA Vial	✓									
	Glass Jar		✓	✓	✓	✓		✓	✓		
	Plastic Jar										
	Preservative	A	A	A	A	A		A	A		
	Container Volume	40 ml	16 oz	16 oz	16 oz	16 oz		16 oz	16 oz		

Note: Sample bottles supplied by lab, unless indicated.

PRESERVATION KEY: A - Sample chilled, B - Filtered, C - Acidified with ____, D - NaOH, E - NaThiosulfate F - Other

REMARKS: (Sample storage, nonstandard sample bottles)

VOA samples will be taken from the regular sample jars.

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Laboratory Number: 15.341-1
Sample Designation: ABN335164-06
Date Extracted: 01/05/89
Date Analyzed: 01/09/89
Matrix: Solid

HALEY AND ALDRICH JOB NO: 10003-41
Sample No: B8-S8

Results expressed on a dry (103 degrees C) basis.
Moisture content: 7%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
N-NITROSODIMETHYLAMINE	BDL	3
PHENOL	BDL	3
Bis (2-CHLOROETHYL) ETHER	BDL	3
2-CHLOROPHENOL	BDL	3
1.3-DICHLOROBENZENE	BDL	3
1.4-DICHLOROBENZENE	BDL	3
BENZYL ALCOHOL	BDL	3
1.2-DICHLOROBENZENE	BDL	3
2-METHYLPHENOL	BDL	3
Bis (2-CHLOROISOPROPYL) ETHER	BDL	3
4-METHYLPHENOL	BDL	3
HEXACHLOROETHANE	BDL	3
N-NITROSODI-N-PROPYLAMINE	BDL	3
NITROBENZENE	BDL	3
ISOPHORONE	BDL	3
2-NITROPHENOL	BDL	3
2.4-DIMETHYLPHENOL	BDL	3
BENZOIC ACID	BDL	10
Bis (2-CHLORETHOXY) METHANE	BDL	3
2.4-DICHLOROPHENOL	BDL	3
1.2.4-TRICHLOROBENZENE	BDL	3
NAPHTHALENE	BDL	3
4-CHLOROANILINE	BDL	3
HEXACHLOROBUTADIENE	BDL	3
4-CHLORO-3-METHYLPHENOL	BDL	3
2-METHYLNAPHTHALENE	BDL	3
HEXACHLOROCYCLOPENTADIENE	BDL	3
2.4.6-TRICHLOROPHENOL	BDL	3
2.4.5-TRICHLOROPHENOL	BDL	10
2-CHLORONAPHTHALENE	BDL	3
2-NITROANILINE	BDL	10
DIMETHYLPHTHALATE	BDL	3
ACENAPHTHYLENE	BDL	3
2.6-DINITROTOLUENE	BDL	3
3-NITROANILINE	BDL	10
ACENAPHTHENE	BDL	3
2.4-DINITROPHENOL	BDL	10

	CONCENTRATION (ug/g)	DETECTION LI (ug/g)
4-NITROPHENOL	BDL	10
DIBENZOFURAN	BDL	3
2.4-DINITROTOLUENE	BDL	3
DIETHYLPHTHALATE	BDL	3
4-CHLOROPHENYL-PHENYLETHER	BDL	3
FLUORENE	BDL	3
4-NITROANILINE	BDL	10
4.6-DINITRO-2-METHYLPHENOL	BDL	10
N-NITROSODIPHENYLAMINE (1)	BDL	3
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	3
4-BROMOPHENYL-PHENYLETHER	BDL	3
HEXACHLOROBENZENE	BDL	3
PENTACHLOROPHENOL	BDL	10
PHENANTHRENE	BDL	3
ANTHRACENE	BDL	3
DI-N-BUTYLPHTHALATE	BDL	3
FLUOROANTHENE	BDL	3
BENZIDENE	BDL	20
PYRENE	BDL	3
BUTYLBENZYLPHTHALATE	BDL	3
3.3'-DICHLOROBENZIDINE	BDL	7
BENZO(a)ANTHRACENE	BDL	3
CHRYSENE	BDL	3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	3
DI-N-OCTYLPHTHALATE	BDL	3
BENZO(b)FLUORANTHENE	BDL	3
BENZO(k)FLUORANTHENE	BDL	3
BENZO(a)PYRENE	BDL	3
IDENO(1.2.3-c.d)PYRENE	BDL	3
DIBENZO(a.h)ANTHRACENE	BDL	3
BENZO(g.h.i)PERYLENE	BDL	3

Detection limit raised by the presence of non-listed compounds.

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: EPA SW 846. 2ND EDITION
METHOD 3550/8270

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-5164
P.O. Number: 10003-41
Date Received: 12/29/88
Date Analyzed: 01/16/89

Sample Description: 88-5164-08

Sample ID: Soil, B8-S3

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	18	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	18	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endrin Aldehyde	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-5164
P.O. Number: 10003-41
Date Received: 12/29/88
Date Analyzed: 01/16/89

Sample Description: 88-5164-07

Sample ID: Soil, B8-S11

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	114	20
4,4'-DDE	ND	20
Endrin	ND	20
Endrin Aldehyde	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-5164
P.O. Number: 10003-41
Date Received: 12/29/88
Date Analyzed: 01/16/89

Sample Description: 88-5164-06 Sample ID: Soil, B8-S8

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	11	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endrin Aldehyde	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	430	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-5164
P.O. Number: 10003-41
Date Received: 12/29/88
Date Analyzed: 01/16/89

Sample Description: 88-5164-05

Sample ID: Soil, B7-S12

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endrin Aldehyde	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESAL Job No. : 88-5164
Date Received: 12-29-88
Date Analyzed: 01-03-89

Sample Description 516401MS   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1,1-Dichloroethylene	94	59-172
Trichloroethylene	112	62-137
hlorobenzene	89	60-133
oluene	111	59-139
Benzene	120	66-142

Method Volatile Organic Analysis, EPA Method 8240 (GC/MS)

Recovery limits are EPA CLP guidelines

ESA LABORATORIES, INC.

PETROLEUM IDENTIFICATION

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885164
P.O. No: 10003-41
Date Received: 12/29/88
Date Analyzed: 01/06/89

	TEST DESCRIPTION	METHOD
(O&G):	OIL & GREASE - IR	EPA 413.2
(TPH):	PETROLEUM HC - IR	EPA 418.1
(PETROL. HC):	PETROLEUM HYDROCARBONS	GC-FID

SMP NO.	DESCRIPTION	O&G (MG/KG)	TPH (MG/KG)	PETROL. HC (MG/KG)	PET. ID
03	B7-S12	-----	-----	9	Heavier than #2 fuel oil lighter than motor oil
06	B8-S8	4340	4100	606	Motor Oil
07	B8-S11	----	----	374	Motor Oil
08	B8-S3	----	----	811	Motor Oil

Sample Prep. EPA Method 9071

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885164
P.O. Number: 10003-41
Date Received: 12/29/88
Date Analyzed: 01/06/89

Sample No.: 885164-6

Sample ID: Soil,10003-41,
B8-S8

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	2.7	0.04	226.3
Beryllium	0.1	0.1	210.1
Cadmium	ND	0.1	213.1
Chromium	13	0.1	218.1
Copper	17	0.4	220.1
Lead	42	1	239.1
Mercury	0.23	0.04	245.1
Nickel	11	0.8	249.1
Selenium	0.1	0.04	270.3
Silver	3	0.2	272.1
Thallium	ND	2	279.1
Zinc	44	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885164
P.O. No.: 10003-41
Date Received: 12/29/88
Date Analyzed: 01/03/89

Sample No.: 885164

Sample ID: Soil,Method Blank

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	22.6
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/kg
ND = Nondetectable

ESAL Job No. : 88-5164
Date Received: 12/29/88
Date Analyzed: 01-03-89

ESAL No. : MB103R1 Sample Desc. : Soil, Method Blank

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	3.9
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	103
Toluene-D8	108
Bromofluorobenzene	98

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885164
P.O. No.: 10003-41
Date Received: 12/29/88
Date Analyzed: 01/03/89

Sample No.: 885164-04

Sample ID: Soil,10003-41,B8-S10

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg
ND = Nondetectable

ESAL Job No. : 88-5164
Date Received: 12/29/88
Date Analyzed: 01-03-89

ESAL No. : 88-5164-04 Sample Desc:SOIL, 10003-41, B8-S10

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1.2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	115
Toluene-D8	112
Bromofluorobenzene	73

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885164
P.O. No.: 10003-41
Date Received: 12/29/88
Date Analyzed: 01/03/89

Sample No.: 885164-03

Sample ID: Soil,10003-41,B7-S12

Analyte	Result (ug/kg)
Acetone	34.4
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg
ND = Nondetectable

ESAL Job No. : 88-5164
Date Received: 12/29/88
Date Analyzed: 01-03-89

ESAL No. : 88-5164-03 Sample Desc:SOIL, 10003-41, B7-S12

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	47.8
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	105
Toluene-D8	119
Bromofluorobenzene	85

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885164
P.O. No.: 10003-41
Date Received: 12/29/88
Date Analyzed: 01/03/89

Sample No.: 885164-02

Sample ID: Soil,10003-41,B7-S8

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg
ND = Nondetectable

ESAL Job No. : 88-5164
Date Received: 12/29/88
Date Analyzed: 01-03-89

ESAL No. : 88-5164-02 Sample Desc:SOIL, 10003-41, B7-S8

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	117
Toluene-D8	108
Bromofluorobenzene	MATRIX EFFECT

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885164
P.O. No.: 10003-41
Date Received: 12/29/88
Date Analyzed: 01/03/89

Sample No.: 885164-01

Sample ID: Soil,10003-41,B7-S6

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg
ND = Nondetectable

ESAL Job No. : 88-5164
Date Received: 12/29/88
Date Analyzed: 01-03-89

ESAL No. : 88-5164-01 Sample Desc:SOIL, 10003-41, B7-S6

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	310
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	109
Toluene-D8	112
Bromofluorobenzene	100

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

esa Laboratories, Inc.

43 WIGGINS AVENUE
BEDFORD, MA. 01730
617-275-0100 • TELEX: 923344
TELECOPIER: (617) 275-5529

Kleo Taliadouros
Haley & Aldrich
58 Charles Street
Cambridge, MA. 02142

ESAL Job No.: 885164
P.O. Number: 10003-41
Date Received: 12/29/88
Date Reported: 01/18/89

SUBJECT: Parcel 18

Your samples which you submitted for analysis on 12/29/88 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Paul Ullucci

Paul A. Ullucci
Laboratory Director

Encl.

RECEIVED
JAN 25 1989
HALEY & ALDRICH, INC.

Haley & Aldrich, Inc.

CHAIN OF CUSTODY RECORD

PAGE 1 OF ~~2~~ 1

H&A FILE NO. 10005.41
PROJECT Pond 15
H&A CONTACT Peter Tsilimidonis

LABORATORY ESA
ADDRESS 43 Wiggins Ave Bedford, MA
CONTACT Reginald Griffin

DELIVERY DATE 28 Dec 1988
DATE FINAL REPORT DUE normal
PROJECT MANAGER'S NAME Joe Gagnon

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	PH/R				NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
67-S6				11-13'	soil	/										2	
67-S8				19-17'	soil	/										2	
67-S12				24-26'	soil	/										2	
68-S10				21-23'	soil	/										2	
67-S3 - not rec'd				5-7'	soil				/							1	included w/ next delivery
67-S7 - not rec'd				17-19'	soil				/							1	included w/ next delivery
67-S12				24-26'	soil				/							1	
~~67-S2~~				~~3-5'~~	~~soil~~				~~/~~							~~1~~	-cancel-
58-~~S5~~ S8				~~9-11~~ 15-17	soil		/	/	/	/		/				1	w/ quantitation *
58-~~S10~~ S11				~~21-23~~ 23-25'	soil				/	/						1	w/ quantitation
58-S3				5'-7'	soil				/	/						1	w/ quantitation

	VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	PH/R				
VOA Vial											LIQUID
Glass Bottle											
Plastic Bottle											
Preser-vative											
Container Volume											
VOA Vial	/										SOLID
Glass Jar		/	/	/	/		/				
Plastic Jar											
Preser-vative	A	A	A	A	A		A				
Container Volume	40 ml	16 oz	16 oz	16 oz	16 oz		16 oz				

Note: Sample bottles supplied by lab, unless indicated.

PRESERVATION KEY: A - Sample chilled, B - Filtered, C - Acidified with ______ D - NaOH, E - NaThiosulfate F - Other

REMARKS: (Sample storage, nonstandard sample bottles)

* 68-S7 also provided if not enough soil in 58-S8 for all analyses. Perform ABN's metals for 58-S9

I. Sampled and Relinquished by
Sign
Print D. [illegible] Griffin
Firm Haley Aldrich Inc
Date 28 Dec 1988 Time 1616

I. Received by
Sign Carol Brown
Print Carol Brown
Firm ESAL
Date 12/28 Time 4:24

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☐ No ☐ Yes

If Yes, explain in remarks.

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Laboratory Number: 15840-3
Sample Designation: 885123-10
Date Extracted: 01/05/89
Date Analyzed: 01/09/89
Matrix: Solid

HALEY AND ALDRICH JOB NO. 10003-41
Sample NO: B6-S8

Results expressed on a dry (103 degrees C) basis.
Moisture content: 6%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
N-NITROSODIMETHYLAMINE	BDL	0.3
PHENOL	BDL	0.3
Bis (2-CHLOROETHYL) ETHER	BDL	0.3
2-CHLOROPHENOL	BDL	0.3
1.3-DICHLOROBENZENE	BDL	0.3
1.4-DICHLOROBENZENE	BDL	0.3
BENZYL ALCOHOL	BDL	0.3
1.2-DICHLOROBENZENE	BDL	0.3
2-METHYLPHENOL	BDL	0.3
Bis (2-CHLOROISOPROPYL) ETHER	BDL	0.3
4-METHYLPHENOL	BDL	0.3
HEXACHLOROETHANE	BDL	0.3
N-NITROSODI-N-PROPYLAMINE	BDL	0.3
NITROBENZENE	BDL	0.3
ISOPHORONE	BDL	0.3
2-NITROPHENOL	BDL	0.3
2.4-DIMETHYLPHENOL	BDL	0.3
BENZOIC ACID	BDL	1
Bis (2-CHLORETHOXY) METHANE	BDL	0.3
2.4-DICHLOROPHENOL	BDL	0.3
1.2.4-TRICHLOROBENZENE	BDL	0.3
NAPHTHALENE	4.1	0.3
4-CHLOROANILINE	BDL	0.3
HEXACHLOROBUTADIENE	BDL	0.3
4-CHLORO-3-METHYLPHENOL	BDL	0.3
2-METHYLNAPHTHALENE	9.2	0.3
HEXACHLOROCYCLOPENTADIENE	BDL	0.3
2.4.6-TRICHLOROPHENOL	BDL	0.3
2.4.5-TRICHLOROPHENOL	BDL	1
2-CHLORONAPHTHALENE	BDL	0.3
2-NITROANILINE	BDL	1
DIMETHYLPHTHALATE	BDL	0.3
ACENAPHTHYLENE	BDL	0.3
2.6-DINITROTOLUENE	BDL	0.3
3-NITROANILINE	BDL	1
ACENAPHTHENE	BDL	0.3
2.4-DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION L (ug/g)
4-NITROPHENOL	BDL	1
DIBENZOFURAN	BDL	0.3
2.4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	BDL	0.3
4-NITROANILINE	BDL	1
4.6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	0.61	0.3
ANTHRACENE	BDL	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	BDL	0.3
BENZIDENE	BDL	2
PYRENE	BDL	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3.3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	BDL	0.3
CHRYSENE	BDL	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	1.1	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	BDL	0.3
BENZO(k)FLUORANTHENE	BDL	0.3
BENZO(a)PYRENE	BDL	0.3
IDENO(1.2.3-c.d)PYRENE	BDL	0.3
DIBENZO(a.h)ANTHRACENE	BDL	0.3
BENZO(g.h.i)PERYLENE	BDL	0.3

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: EPA SW 846. 2ND EDITION
METHOD 3550/3270

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

oratory Number: 15840-1
ple Designation: 385123-4
ate Extracted: 01/05/89
te Analyzed: 01/09/89
rix: Solid

HALEY AND ALDRICH JOB NO: 10003-41
Sample NO: B4-S6

sults expressed on a dry (103 degrees C) basis.
isture content: 5%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
-NITROSODIMETHYLAMINE	BDL	0.3
ENOL	BDL	0.3
s (2-CHLOROETHYL) ETHER	BDL	0.3
-CHLOROPHENOL	BDL	0.3
3-DICHLOROBENZENE	BDL	0.3
4-DICHLOROBENZENE	BDL	0.3
NZYL ALCOHOL	BDL	0.3
.2-DICHLOROBENZENE	BDL	0.3
METHYLPHENOL	BDL	0.3
s (2-CHLOROISOPROPYL) ETHER	BDL	0.3
-METHYLPHENOL	BDL	0.3
XACHLOROETHANE	BDL	0.3
NITROSODI-N-PROPYLAMINE	BDL	0.3
TROBENZENE	BDL	0.3
SOPHORONE	BDL	0.3
NITROPHENOL	BDL	0.3
4-DIMETHYLPHENOL	BDL	0.3
ENZOIC ACID	BDL	1
s (2-CHLORETHOXY) METHANE	BDL	0.3
4-DICHLOROPHENOL	BDL	0.3
.2.4-TRICHLOROBENZENE	BDL	0.3
APHTHALENE	BDL	0.3
CHLOROANILINE	BDL	0.3
XACHLOROBUTADIENE	BDL	0.3
-CHLORO-3-METHYLPHENOL	BDL	0.3
METHYLNAPHTHALENE	BDL	0.3
XACHLOROCYCLOPENTADIENE	BDL	0.3
.4.6-TRICHLOROPHENOL	BDL	0.3
4.5-TRICHLOROPHENOL	BDL	1
CHLORONAPHTHALENE	BDL	0.3
2-NITROANILINE	BDL	1
IMETHYLPHTHALATE	BDL	0.3
ENAPHTHYLENE	BDL	0.3
6-DINITROTOLUENE	BDL	0.3
3-NITROANILINE	BDL	1
ENAPHTHENE	BDL	0.3
4-DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
4-NITROPHENOL	BDL	1
DIBENZOFURAN	BDL	0.3
2.4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	BDL	0.3
4-NITROANILINE	BDL	1
4.6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	BDL	0.3
ANTHRACENE	BDL	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	BDL	0.3
BENZIDENE	BDL	2
PYRENE	BDL	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3.3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	BDL	0.3
CHRYSENE	Trace	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	BDL	0.3
BENZO(k)FLUORANTHENE	BDL	0.3
BENZO(a)PYRENE	BDL	0.3
IDENO(1.2.3-c.d)PYRENE	BDL	0.3
DIBENZO(a.h)ANTHRACENE	BDL	0.3
BENZO(g.h.i)PERYLENE	BDL	0.3

'Trace' denotes probable presence below listed detection limit.

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: EPA SW 846. 2ND EDITION
METHOD 3550/3270

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Laboratory Number: 15840-2
Sample Designation: 885128-6
Date Extracted: 01/05/89
Date Analyzed: 01/10/89
Matrix: Solid

HALEY AND ALDRICH JOB NO: 10003-41
Sample NO: B5-S4

Results expressed on a dry (103 degrees C) basis.
Moisture content: 9%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
N-NITROSODIMETHYLAMINE	BDL	0.3
PHENOL	BDL	0.3
Bis (2-CHLOROETHYL) ETHER	BDL	0.3
2-CHLOROPHENOL	BDL	0.3
1,3-DICHLOROBENZENE	BDL	0.3
1.4-DICHLOROBENZENE	BDL	0.3
BENZYL ALCOHOL	BDL	0.3
1.2-DICHLOROBENZENE	BDL	0.3
2-METHYLPHENOL	BDL	0.3
Bis (2-CHLOROISOPROPYL) ETHER	BDL	0.3
4-METHYLPHENOL	BDL	0.3
HEXACHLOROETHANE	BDL	0.3
N-NITROSODI-N-PROPYLAMINE	BDL	0.3
NITROBENZENE	BDL	0.3
ISOPHORONE	BDL	0.3
2-NITROPHENOL	BDL	0.3
2.4-DIMETHYLPHENOL	BDL	0.3
BENZOIC ACID	BDL	1
Bis (2-CHLORETHOXY) METHANE	BDL	0.3
2.4-DICHLOROPHENOL	BDL	0.3
1.2.4-TRICHLOROBENZENE	BDL	0.3
NAPHTHALENE	BDL	0.3
4-CHLOROANILINE	BDL	0.3
HEXACHLOROBUTADIENE	BDL	0.3
4-CHLORO-3-METHYLPHENOL	BDL	0.3
2-METHYLNAPHTHALENE	BDL	0.3
HEXACHLOROCYCLOPENTADIENE	BDL	0.3
2.4.6-TRICHLOROPHENOL	BDL	0.3
2.4.5-TRICHLOROPHENOL	BDL	1
2-CHLORONAPHTHALENE	BDL	0.3
2-NITROANILINE	BDL	1
DIMETHYLPHTHALATE	BDL	0.3
ACENAPHTHYLENE	BDL	0.3
2.6-DINITROTOLUENE	BDL	0.3
3-NITROANILINE	BDL	1
ACENAPHTHENE	BDL	0.3
2.4-DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION L (ug/g)
4-NITROPHENOL	BDL	1
DIBENZOFURAN	BDL	0.3
2.4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	BDL	0.3
4-NITROANILINE	BDL	1
4.6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	BDL	0.3
ANTHRACENE	BDL	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	BDL	0.3
BENZIDENE	BDL	2
PYRENE	BDL	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3.3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	BDL	0.3
CHRYSENE	BDL	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	BDL	0.3
BENZO(k)FLUORANTHENE	BDL	0.3
BENZO(a)PYRENE	BDL	0.3
IDENO(1.2.3-c.d)PYRENE	BDL	0.3
DIBENZO(a.h)ANTHRACENE	BDL	0.3
BENZO(g.h.i)PERYLENE	BDL	0.3

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: EPA SW 846. 2ND EDITION
METHOD 3550/3270

esa

Kleo,

ABN's

HALEY AND ALDRICH JOB NO: 10003-41

ESAL JOB NUMBER	HALEY AND ALDRICH SAMPLE NUMBER
885128-4	B4-S6
885128-6	B5-S4
885128-10	B6-S8

TOTAL CYANIDE

ESAL JOB NUMBER: 885128-10

H&A JOB NUMBER: 10003-41

SAMPLE ID: B6-S8

TOTAL CYANIDE: less than 0.7 ug/g

NOTE: Hard copy data to follow.

ESA LABORATORIES, INC.
43 WIGGINS AVE., BEDFORD, MA 01730
617-275-0100

Analysis Required

Station Number	Time (24 hr)	Cont. ID	Location Description	Sample Type	ABN	Remarks	Tot. # of Cont.
			885128-4	Soil	X		1
			885128-6	Soil	X		1
			885128-10	Soil	X		1
						Total Numbers of Cont.	3

Relinquished By: Date/Time Received by Signature

Relinquished By: Date/Time Received by Signature

Relinquished By: Date/Time Received by Signature

NOTES: Results needed by Fri 1-13-89

P.O. # L 881210

Laboratory Comments:

Client File No. P.O. No.

Project

Location

Collector

Date of Collection Sheet of

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 88-5128
P.O. Number: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/10/89

Sample Description: 88-5128-10

Sample ID: Soil, 10003-41 B6-S8

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	57	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	88	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	71	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PETROLEUM IDENTIFICATION

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885128
P.O. No: 10003-41
Date Received: 12/23/88
Date Analyzed: 12/27/88

	TEST DESCRIPTION	METHOD
(O&G):	OIL & GREASE - IR	EPA 413.2
(TPH):	PETROLEUM HC - IR	EPA 418.1
(PETROL. HC):	PETROLEUM HYDROCARBONS	GC-FID

SMP NO.	DESCRIPTION	O&G (MG/KG)	TPH (MG/KG)	PETROL. HC (MG/KG)	PET. ID
02	B4-S11	570	540	-----	------
04	B4-S6	370	370	16	Weathered Petrol. product
06	B5-S4	370	320	-----	------
08	B5-S7	930	880	22	Weathered Petrol. product
10	B6-S8	340	330	201	#2 Fuel Oil
12	B6-S11	64	56	-----	------

Sample Prep. EPA Method 9071

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885128
P.O. Number: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 885128-12

Sample ID: Soil,10003-41
B6-S11

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	7.4	0.04	226.3
Beryllium	0.1	0.1	210.1
Cadmium	ND	0.1	213.1
Chromium	15	1	218.1
Copper	24	0.4	220.1
Lead	4	1	239.1
Mercury	ND	0.04	245.1
Nickel	11	0.8	249.1
Selenium	ND	0.04	270.3
Silver	4	0.2	272.1
Thallium	ND	2	279.1
Zinc	47	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadorous

ESAL Job No.: 885128
P.O. Number: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 885128-10
Replicate

Sample ID: Soil,10003-41
B6-S8

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	2.9	0.04	226.3
Beryllium	0.2	0.1	210.1
Cadmium	ND	0.1	213.1
Chromium	17	1	218.1
Copper	22	0.4	220.1
Lead	7	1	239.1
Mercury	ND	0.04	245.1
Nickel	13	0.8	249.1
Selenium	ND	0.04	270.3
Silver	4	0.2	272.1
Thallium	ND	2	279.1
Zinc	36	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885128
P.O. Number: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 885128-10

Sample ID: Soil,10003-41
B6-S8

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	2.3	0.04	226.3
Beryllium	0.2	0.1	210.1
Cadmium	ND	0.1	213.1
Chromium	16	1	218.1
Copper	18	0.4	220.1
Lead	7	1	239.1
Mercury	ND	0.04	245.1
Nickel	13	0.8	249.1
Selenium	ND	0.04	270.3
Silver	4	0.2	272.1
Thallium	ND	2	279.1
Zinc	34	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885128
P.O. Number: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 885128-8

Sample ID: Soil,10003-41
B5-S7

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	6.7	0.04	226.3
Beryllium	0.6	0.1	210.1
Cadmium	ND	0.1	213.1
Chromium	37	1	218.1
Copper	22	0.4	220.1
Lead	10	1	239.1
Mercury	0.041	0.04	245.1
Nickel	23	0.8	249.1
Selenium	ND	0.04	270.3
Silver	6	0.2	272.1
Thallium	ND	2	279.1
Zinc	61	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885128
P.O. Number: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 885128-6

Sample ID: Soil,10003-41
B5-S4

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	8.2	0.04	226.3
Beryllium	0.2	0.1	210.1
Cadmium	ND	0.1	213.1
Chromium	13	1	218.1
Copper	16	0.4	220.1
Lead	49	1	239.1
Mercury	0.17	0.04	245.1
Nickel	8	0.8	249.1
Selenium	0.22	0.04	270.3
Silver	5	0.2	272.1
Thallium	ND	2	279.1
Zinc	59	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885128
P.O. Number: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 885128-4

Sample ID: Soil,10003-41
B4-S6

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	2.9	0.04	226.3
Beryllium	0.3	0.1	210.1
Cadmium	ND	0.1	213.1
Chromium	25	1	218.1
Copper	28	0.4	220.1
Lead	15	1	239.1
Mercury	0.048	0.04	245.1
Nickel	28	0.8	249.1
Selenium	ND	0.04	270.3
Silver	4.4	0.2	272.1
Thallium	ND	2	279.1
Zinc	46	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 885128
P.O. Number: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/05/89

Sample No.: 885192-2

Sample ID: Soil,10003-41,
B4-S11

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	2.5	0.04	226.3
Beryllium	0.24	0.1	210.1
Cadmium	ND	0.1	213.1
Chromium	16	0.1	218.1
Copper	16	0.4	220.1
Lead	5	1	239.1
Mercury	0.10	0.004	245.1
Nickel	9	0.8	249.1
Selenium	ND	0.04	270.3
Silver	2.8	0.2	272.1
Thallium	ND	2	279.1
Zinc	31	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 88-5128
P.O. Number: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/10/89

Sample Description: 88-5128-08

Sample ID: Soil, 10003-41 B5-S7

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	127	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 88-5128
P.O. Number: 10003-41
Date Received: 12/23/88
Date Analyzed: 01/10/89

Sample Description: 88-5128-04

Sample ID: Soil, 10003-41
B4-S6

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	12	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	23	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	33	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESAL Job No. : 88-5128
Date Received: 12-23-88
Date Analyzed: 12-30-88

Sample Description *********   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1,1-Dichloroethylene	88	59-172
Trichloroethylene	114	62-137
Chlorobenzene	106	60-133
Toluene	104	59-139
Benzene	98	66-142

Method Volatile Organic Analysis, EPA Method 8240 (GC/MS)

Recovery limits are EPA CLP guidelines

ESAL Job No. : 89-0051
Date Received: 01/06/89
Date Analyzed: 01-11-89

ESAL No. : 89-0051-01   Sample Desc:SOIL, 10003-41, B3-S5

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	99
Toluene-D8	99
Bromofluorobenzene	101

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890051
P.O. No.: 10003-41
Date Received: 01/06/89
Date Analyzed: 01/20/89

Sample No.: 890051-01

Sample ID: Soil, 10003-41, B3-S5

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 89-0051
Date Received: 01/06/89
Date Analyzed: 01-11-89

ESAL No. : 89-0051-04 Sample Desc:SOIL, 10003-41, B3-S12

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	107
Toluene-D8	101
Bromofluorobenzene	103

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

esa

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890051
P.O. No.: 10003-41
Date Received: 01/06/89
Date Analyzed: 01/20/89

Sample No.: 890051-04

Sample ID: Soil, 10003-41, B13-S12

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 89-0051
Date Received: 01/06/89
Date Analyzed: 01-11-89

ESAL No. : 89-0051-08   Sample Desc:SOIL 10003-41, B13-S9

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	2.3
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	107
Toluene-D8	99
Bromofluorobenzene	121

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890051
P.O. No.: 10003-41
Date Received: 01/06/89
Date Analyzed: 01/20/89

Sample No.: 890051-08

Sample ID: Soil, 10003-41, B13-S9

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 89-0051
Date Received: 01/06/89
Date Analyzed: 01-11-89

ESAL No. : 89-0051-12   Sample Desc. :SOIL, 10003-41, B15-S7

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	103
Toluene-D8	101
Bromofluorobenzene	120

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890051
P.O. No.: 10003-41
Date Received: 01/06/89
Date Analyzed: 01/20/89

Sample No.: 890051-12

Sample ID: Soil, 10003-41, B15-S7

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

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ESAL Job No. : 89-0051
Date Received: 01/06/89
Date Analyzed: 01-11-89

ESAL No. : MB111R1 Sample Desc. : Soil, Method Blank

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	3.8
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	102
Toluene-D8	98
Bromofluorobenzene	121

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890051
P.O. No.: 10003-41
Date Received: 01/06/89
Date Analyzed: 01/20/89

Sample No.: 890051

Sample ID: Soil, Method blank

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 89-0051
Date Received: 01-06-89
Date Analyzed: 01-11-89

Sample Description 006701MS   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1,1-Dichloroethylene	70	59-172
Trichloroethylene	87	62-137
Chlorobenzene	77	60-133
Toluene	87	59-139
Benzene	122	66-142

Method Volatile Organic Analysis, EPA Method 8240 (GC/MS)

Recovery limits are EPA CLP guidelines

ESA LABORATORIES, INC.

PP13

Haley & Aldrich
Kleo Taliadouros

ESAL Job No.: 890051
P.O. Number: 10003-41
Date Received: 01/06/89
Date Analyzed: 01/20/89

Sample No.: 890051-10

Sample ID: Soil,10003-41,
B13-S10

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	6.1	0.04	226.3
Beryllium	0.8	0.1	210.1
Cadmium	ND	0.1	213.1
Chromium	36	1.0	218.1
Copper	23	0.4	220.1
Lead	ND	1	239.1
Mercury	ND	0.04	245.1
Nickel	49	0.8	249.1
Selenium	ND	0.04	270.3
Silver	3.5	0.2	272.1
Thallium	16	2	279.1
Zinc	44	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PETROLEUM IDENTIFICATION

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 890051
P.O. No. 10003-41
Date Received: 01/06/89
Date Analyzed: 01/20/89

SMP NO.	DESCRIPTION	PETRO. HC (MG/KG)	PET. ID
02	B3-S5	72	Heavier than
03	B3-S8	15	#2 Fuel Oil
05	B3-S12	117	Lighter than Motor
07	B13-S6	56	Oil (? Weathered
09	B13-S9	47	#4 Fuel Oil)
11	B15-S4	201	
13	B15-S7	45	
14	B15-S9	41	

Sample Prep. EPA Method 9071

ESA LABORATORIES, INC.

TOTAL PETROLEUM HYDROCARBONS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890051
P.O. Number: 10003-41
Date Received: 01/06/89
Date Analyzed: 01/20/89

	TEST DESCRIPTION	METHOD
(O&G):	OIL & GREASE - IR	EPA 413.2
(TPH):	PETROLEUM HC - IR	EPA 418.1

SMP NO.	DESCRIPTION	O&G (MG/KG)	TPH (MG/KG)
08	B13-S9	74	43

Sample Prep. EPA Method 9071

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 890051
P.O. Number: 10003-41
Date Received: 01-06-89
Date Analyzed: 01-23-89

Sample Description: 890051-03

Sample ID: SOIL, B3-S8

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	146	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	39	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	72	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	56	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 890051
P.O. Number: 10003-41
Date Received: 01-06-89
Date Analyzed: 01-23-89

Sample Description: 890051-06 Sample ID: SOIL, B13-S3

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	29	10
beta-BHC	44	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	29	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 890051
P.O. Number: 10003-41
Date Received: 01-06-89
Date Analyzed: 01-23-89

Sample Description: 890051-08   Sample ID: SOIL, B13-S9

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	139	10
beta-BHC	572	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable   LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 890051
P.O. Number: 10003-41
Date Received: 01-06-89
Date Analyzed: 01-23-89

Sample Description: 890051-10

Sample ID: SOIL, B13-S10

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	616	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 890051
P.O. Number: 10003-41
Date Received: 01-06-89
Date Analyzed: 01-23-89

Sample Description: 890051-11 Sample ID: SOIL, B15-S4

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	29	10
Heptachlor	128	10
Aldrin	ND	10
Heptachlor Epoxide	35	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 890051
P.O. Number: 10003-41
Date Received: 01-06-89
Date Analyzed: 01-23-89

Sample Description: 890051-12 Sample ID: SOIL, B15-S7

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	28	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 890051
P.O. Number: 10003-41
Date Received: 01-06-89
Date Analyzed: 01-23-89

Sample Description: 890051-14 Sample ID: SOIL, B15-S9

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	1032	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	47	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

HALEY & ALDRICH, INC.

P.O. 10003-41 SAMPLE # B13-S9

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Laboratory Number:	15.953-1
Sample Designation:	880S1-08
Date Extracted:	01/18/89
Date Analyzed:	01/20/89
Matrix:	Solid

Results expressed on a dry (103 degrees C) basis.

Moisture content: 12%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
N-NITROSODIMETHYLAMINE	BDL	0.3
PHENOL	BDL	0.3
Bis (2-CHLOROETHYL) ETHER	BDL	0.3
2-CHLOROPHENOL	BDL	0.3
1.3-DICHLOROBENZENE	BDL	0.3
1.4-DICHLOROBENZENE	BDL	0.3
BENZYL ALCOHOL	BDL	0.3
1.2-DICHLOROBENZENE	BDL	0.3
2-METHYLPHENOL	BDL	0.3
Bis (2-CHLOROISOPROPYL) ETHER	BDL	0.3
4-METHYLPHENOL	BDL	0.3
HEXACHLOROETHANE	BDL	0.3
N-NITROSODI-N-PROPYLAMINE	BDL	0.3
NITROBENZENE	BDL	0.3
ISOPHORONE	BDL	0.3
2-NITROPHENOL	BDL	0.3
2.4-DIMETHYLPHENOL	BDL	0.3
BENZOIC ACID	BDL	1
Bis (2-CHLORETHOXY) METHANE	BDL	0.3
2.4-DICHLOROPHENOL	BDL	0.3
1.2.4-TRICHLOROBENZENE	BDL	0.3
NAPHTHALENE	BDL	0.3
4-CHLOROANILINE	BDL	0.3
HEXACHLOROBUTADIENE	BDL	0.3
4-CHLORO-3-METHYLPHENOL	BDL	0.3
2-METHYLNAPHTHALENE	BDL	0.3
HEXACHLOROCYCLOPENTADIENE	BDL	0.3
2.4.6-TRICHLOROPHENOL	BDL	0.3
2.4.5-TRICHLOROPHENOL	BDL	1
2-CHLORONAPHTHALENE	BDL	0.3
2-NITROANILINE	BDL	1
DIMETHYLPHTHALATE	BDL	0.3
ACENAPHTHYLENE	BDL	0.3
2.6-DINITROTOLUENE	BDL	0.3
3-NITROANILINE	BDL	1
ACENAPHTHENE	BDL	0.3
2.4-DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION (ug/g
4-NITROPHENOL	BDL	1
DIBENZOFURAN	BDL	0.3
2.4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	BDL	0.3
4-NITROANILINE	BDL	1
4.6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	BDL	0.3
ANTHRACENE	BDL	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	BDL	0.3
BENZIDENE	BDL	2
PYRENE	BDL	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3.3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	BDL	0.3
CHRYSENE	BDL	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	BDL	0.3
BENZO(k)FLUORANTHENE	BDL	0.3
BENZO(a)PYRENE	BDL	0.3
IDENO(1.2.3-c.d)PYRENE	BDL	0.3
DIBENZO(a.h)ANTHRACENE	BDL	0.3
BENZO(g.h.i)PERYLENE	BDL	0.3

BDL = BELOW DETECTION LIMIT

METHOD REFERENCE: EPA SW 846. 2ND EDITION
METHOD 3550/8270

HALEY & ALDRICH INC.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

H&A FILE NO. 1 0 0 0 3 - 4 1
PROJECT PARCEL 18
H&A CONTACT KLEO TALIAFERROS

LABORATORY ESA
ADDRESS 13 Wiggins Rd Bedford
CONTACT ~~Bed~~ REG GRIFFIN

DELIVERY DATE 11 JAN 89
DATE FINAL REPORT DUE 1 week
PROJECT MANAGER'S INITIALS Todd Griffin

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	TPH mIR				NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
B16-S2		3 JAN 89		3'-5'	Soil					X						1	
B16-S9		4-JAN 89		17'-19'		X			X	X						3	
B16-S11		4-JAN 89		22'-24'						X						1	
B18-S6		5 JAN 89		11'-13'		X				X						3	
B18-S10		5-JAN 89		20'-22'		X			X	X		X				3	
B18-S12		5 JAN 89		24'-26'		X				X						3	

I. Sampled and Relinquished by
Sign David M Puls
Print David M Puls
Firm H&A
Date 11 JAN 89 Time 1542

I. Received by
Sign Paul Ulluci
Print PAUL A ULLUCI
Firm ESA LABS
Date 1-11-89 Time 1542

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☒ No ☐ Yes
If Yes, explain in remarks.

		VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	TPH mIR			
LIQUID	VOA Vial										
	Glass Bottle										
	Plastic Bottle										
	Preservative										
	Container Volume										
SOLID	VOA Vial	X									
	Glass Jar				X	X		X			
	Plastic Jar										
	Preservative	A			A	A		A			
	Container Volume	40 ml			16 oz	16 oz		16 oz			

Note: Sample bottles supplied by lab, unless indicated.

PRESERVATION KEY: A - Sample chilled, B - Filtered, C - Acidified with ______ D - NaOH, E - NaThiosulfate, F - Other

REMARKS: (Sample storage, nonstandard sample bottles)

esa Laboratories, Inc.

43 WIGGINS AVENUE
BEDFORD, MA. 01730
617-275-0100 • TELEX: 923344
TELECOPIER: (617) 275-5529

KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02142

ESAL Job No.: 890109
P.O. Number: 10003-41
Date Received: 01/11/89
Date Reported: 02/02/89

SUBJECT: PARCEL 18, 10003-41

Your samples which you submitted for analysis on 01/11/89 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Paul A. Ullucci

Paul A. Ullucci
Technical Director

RECEIVED
FEB 08 1989
HALEY & ALDRICH, INC.

ESAL Job No. : 89-0109
Date Received: 01/11/89
Date Analyzed: 01-12-89

ESAL No. : 89-0109-02 Sample Desc:SOIL, 10003-41, B16-S9

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	96
Toluene-D8	81
Bromofluorobenzene	89

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890109
P.O. No.: 10003-41
Date Received: 01/11/89
Date Analyzed: 01/12/89

Sample No.: 89-0109-02 Sample ID: Soil, 10003-41, B16-S9

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 89-0109
Date Received: 01/11/89
Date Analyzed: 01-12-89

ESAL No. : 89-0109-04 Sample Desc:SOIL, 10003-41, B18-S6

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	103
Toluene-D8	96
Bromofluorobenzene	84

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890109
P.O. No.: 10003-41
Date Received: 01/11/89
Date Analyzed: 01/12/89

Sample No.: 89-0109-04 Sample ID: Soil, 10003-41, B18-S6

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

esa

ESAL Job No. : 89-0109
Date Received: 01/11/89
Date Analyzed: 01-12-89

ESAL No. : 89-0109-05   Sample Desc:SOIL, 10003-41, B18-S10

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	101
Toluene-D8	102
Bromofluorobenzene	75

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890109
P.O. No.: 10003-41
Date Received: 01/11/89
Date Analyzed: 01/12/89

Sample No.: 89-0109-05

Sample ID: Soil, 10003-41, B18-S10

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 89-0109
Date Received: 01/11/89
Date Analyzed: 01-12-89

ESAL No. : 89-0109-06   Sample Desc:SOIL, 10003-41, B18-S12

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	99
Toluene-D8	100
Bromofluorobenzene	90

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890109
P.O. No.: 10003-41
Date Received: 01/11/89
Date Analyzed: 01/12/89

Sample No.: 89-0109-06

Sample ID: Soil, 10003-41, B16-S1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 89-0109
Date Received: 01-11-89
Date Analyzed: 01-12-89

Sample Description 005402MS   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1 1-Dichloroethylene	106	59-172
Trichloroethylene	110	62-137
Chlorobenzene	93	60-133
Toluene	104	59-139
Benzene	105	66-142

Method Volatile Organic Analysis, EPA Method 8240 (GC/MS)

Recovery limits are EPA CLP guidelines

ESAL Job No. : 89-0109
Date Received: 01/11/89
Date Analyzed: 01-12-89

ESAL No. : MB112R1 Sample Desc. : Soil, Method Blank

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	6.7
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1 1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	103
Toluene-D8	97
Bromofluorobenzene	87

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890109
P.O. No.: 10003-41
Date Received: 01/11/89
Date Analyzed: 01/12/89

Sample No.: 89-0109

Sample ID: Soil, Method Blank

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	21.6
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESA LABORATORIES, INC.

PETROLEUM IDENTIFICATION

LEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890109
P.O. No. 10003-41
Date Received: 01/11/89
Date Analyzed: 01/23/89

SMP NO.	DESCRIPTION	PETRO. HC (MG/KG)	PET. ID
01	B16-S2	7	*
02	B16-S9	128	*
03	B16-S11	99	*
04	B18-S6	88	*
05	B18-S10	105	*
06	B18-S12	110	*

Sample Prep. EPA Method 9071

*N-16 to N-30 as in Weathered #2 Fuel Oil and Motor Oil.

ESA LABORATORIES, INC.

TOTAL PETROLEUM HYDROCARBONS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890109
P.O. Number: 10003-41
Date Received: 01/11/89
Date Analyzed: 01/23/89

	TEST DESCRIPTION	METHOD
(O&G):	OIL & GREASE - IR	EPA 413.2
(TPH):	PETROLEUM HC - IR	EPA 418.1

SMP NO.	DESCRIPTION	O&G (MG/KG)	TPH (MG/KG)
05	B18-S10	154	93

Sample Prep. EPA Method 9071

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No. : 890109
P.O. Number: 10003-41
Date Received: 01/11/89
Date Analyzed: 01/24/89

Sample Description: 89-0109-2   Sample ID: Soil, B16-S9

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	35	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable   LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No. : 890109
P.O. Number: 10003-41
Date Received: 01/11/89
Date Analyzed: 01/24/89

Sample Description: 89-0109-5 Sample ID: Soil, B18-S10

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	75	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	51	10
Heptachlor	544	10
Aldrin	167	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

H&A Haley & Aldrich, Inc.

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

H&A FILE NO. 1005-41
PROJECT Parcel 18
H&A CONTACT Alec [illegible]

LABORATORY ESA
ADDRESS 43 Wiggins Bedford, MA
CONTACT [illegible]

DELIVERY DATE 1/18/89
DATE FINAL REPORT DUE normal
PROJECT MANAGER'S NAME [illegible]

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	Cyanide	TPH by IR			NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
819-55		1/12/89		9'-11'	soil					✓						1	
819-59		1/12/89		17'-19'	soil					✓						1	
820-58		1/13/89		15'-17'	soil											1	
89-S8"R"		11 Jan 89	1115	—	WATER	X	X	X	X	~~X~~		X	X			7	← note correction:
89b-S8b		4 Jan 89		—	WATER	X				DMB						1	TPH by IR, not
																	PET ID (DMB)

			VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	Cyanide	TPH by IR		
I. Sampled and Relinquished by Sign [illegible] Print David M. Bois Firm H&A Date 18 JAN 89 Time 1440	I. Received by Sign Rosemary Payne Print ROSEMARY PAYNE Firm ESA LABS Date 1/18/89 Time 2:40 P.M	LIQUID VOA Vial	X						DMB			
		LIQUID Glass Bottle		X		X			~~X~~	X		
		LIQUID Plastic Bottle			X				X			
II. Relinquished by Sign Print Firm Date Time	II. Received by Sign Print Firm Date Time	LIQUID Preservative	A	A	A/C	A			A/D	AL		
		LIQUID Container Volume	40 ml	1 l	1/2 l	1 l			1/2 l	1 l		
III. Relinquished by Sign Print Firm Date Time	III. Received by Sign Print Firm Date Time	SOLID VOA Vial										
		SOLID Glass Jar										
		SOLID Plastic Jar										
IV. Relinquished by Sign Print Firm Date Time	IV. Received by Sign Print Firm Date Time	SOLID Preservative					A		A			
		SOLID Container Volume					16 oz		16 oz			

Note: Sample bottles supplied by lab, unless indicated.

REMARKS: (Sample storage, nonstandard sample bottles)

F[illegible]nce Samples tampered with? ☐ No ☐ Yes

PRESERVATION KEY: A - Sample chilled, [illegible] TPH [illegible]

esa Laboratories, Inc.

43 WIGGINS AVENUE
BEDFORD, MA. 01730
617-275-0100 • TELEX: 923344
TELECOPIER: (617) 275-5529

KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 Charles Street
Cambridge, MA. 02142

ESAL Job No.: 89019
P.O. Number: 10003-41
Date Received: 01/18/88
Date Reported: 02/06/89

SUBJECT: Parcel 18; 10003-41

Your samples which you submitted for analysis on 01/18/89 have been processed. The results of the analvses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Paul A. Ullucci
Laboratory Director

RECEIVED
FEB 9 1989
HALEY & ALDRICH, INC.

ESAL Job No. : 89-0193
Date Received: 01/18/89
Date Analyzed: 01-24-89

ESAL No. : 89-0193-02 Sample Desc:SOIL, 10003-41, B10-S10

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	109
Toluene-D8	117
Bromofluorobenzene	131

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. No.: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/24/89

Sample No.: 89-0193-02

Sample ID: Soil, 10003-41, B10-S

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 89-0193
Date Received: 01/18/89
Date Analyzed: 01-24-89

ESAL No. : 89-0193-04   Sample Desc:SOIL 10003-41 B11-S9

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	41
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	3500
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	77
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	46
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	107
Toluene-D8	116
Bromofluorobenzene	98

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. No.: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/24/89

Sample No.: 89-0193-04

Sample ID: Soil, 10003-41, B11-S9

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	6200

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 89-0193
Date Received: 01/18/89
Date Analyzed: 01-24-89

ESAL No : 89-0193-05 Sample Desc:SOIL, 10003-41, B11-S12

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	99
Toluene-D8	116
Bromofluorobenzene	87

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. No.: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/24/89

Sample No.: 89-0193-05

Sample ID: Soil, 10003-41, B11-S12

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	113

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 89-0193
Date Received: 01/18/89
Date Analyzed: 01-24-89

ESAL No. : 89-0193-07   Sample Desc:SOIL, 10003-41 B11-S5

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	100
Toluene-D8	100
Bromofluorobenzene	94

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 89019
P.O. No.: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/24/89

Sample No.: 89-0193-07

Sample ID: Soil, 10003-41, B11-S

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 89-0193
Date Received: 01/18/89
Date Analyzed: 01-24-89

ESAL No. : 89-0193-14 Sample Desc. :10003-41, B9-S8

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	8.7
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	113
Toluene-D8	116
Bromofluorobenzene	115

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. No.: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/24/89

Sample No.: 89-0193-14

Sample ID: Soil, 10003-41, B9-S8

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 89-0193
Date Received: 01/18/89
Date Analyzed: 01-18-89

ESAL No. : MB124P2 Sample Desc. : Water Method Blank

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	101
Toluene-D8	128
Bromofluorobenzene	99

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. No.: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/24/89

Sample No.: MB124R2

Sample ID: Water, Method Blank

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No. : 89-0193
Date Received: 01-18-89
Date Analyzed: 01-24-89

Sample Description 014207MS   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1 1-Dichloroethylene	104	61-145
Trichloroethylene	112	71-120
Chlorobenzene	95	75-130
Toluene	94	76-125
Benzene	114	76-127

Method : Volatile Organic Analysis, EPA Method 624 (GC/MS)

Recovery limits are EPA CLP guidelines

ESAL Job No. : 89-0193
Date Received: 01-18-89
Date Analyzed: 01-24-89

Sample Description 014201MS   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1,1-Dichloroethylene	104	59-172
Trichloroethylene	112	62-137
Chlorobenzene	95	60-133
Toluene	94	59-139
Benzene	114	66-142

Method Volatile Organic Analysis, EPA Method 8240 (GC/MS)

Recovery limits are EPA CLP guidelines

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. Number: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/25/89

Sample NO.: 89-0193-14

Sample ID: Water,10003-41,
B9-S8"

Analyte	Result (mg/L)	LOD (mg/L)	Method
Antimony	ND	0.1	204.1
Arsenic	ND	0.002	226.3
Beryllium	ND	0.005	210.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.005	218.1
Copper	ND	0.02	220.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Nickel	0.003	0.04	249.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1
Thallium	ND	0.1	279.1
Zinc	ND	0.005	289.1

Sample Prep.: EPA 3010

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

TOTAL PETROLEUM HYDROCARBONS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 880193
P.O. Number: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/19/89

	TEST DESCRIPTION	METHOD
(O&G):	OIL & GREASE - IR	EPA 413.2
(TPH):	PETROLEUM HC - IR	EPA 418.1

SMP NO.	DESCRIPTION	O&G (MG/L)	TPH (MG/L)
14	B9-S8	---	1

Sample Prep. EPA Method 9070

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 89019
P.O. Number: 10003-4
Date Received: 01/18/89
Date Analyzed: 01/27/89

Sample Description: 89-0193-14

Sample ID: Water, 89-58

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	0.36	0.05
beta-BHC	ND	0.05
delta-BHC	ND	0.05
gamma-BHC	ND	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	ND	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	ND	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Laboratory Number:	15.052-4	
Sample Designation:	88-0193-14	Project # 10003-41 Sample # B9-S8
Date Extracted:	1/25/89	
Date Analyzed:	Water	
Matrix:		

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
N-NITROSODIMETHYLAMINE	BDL	75
PHENOL	BDL	30
Bis (2-CHLOROETHYL) ETHER	BDL	30
2-CHLOROPHENOL	BDL	30
1.3-DICHLOROBENZENE	BDL	30
1.4-DICHLOROBENZENE	BDL	30
BENZYL ALCOHOL	BDL	30
1.2-DICHLOROBENZENE	BDL	30
2-METHYLPHENOL	BDL	30
Bis (2-CHLOROISOPROPYL) ETHER	BDL	30
4-METHYLPHENOL	BDL	30
HEXACHLOROETHANE	BDL	75
N-NITROSODI-N-PROPYLAMINE	BDL	30
NITROBENZENE	BDL	30
ISOPHORONE	BDL	30
2-NITROPHENOL	BDL	30
2.4-DIMETHYLPHENOL	BDL	30
BENZOIC ACID	BDL	150
Bis (2-CHLORETHOXY) METHANE	BDL	30
2.4-DICHLOROPHENOL	BDL	30
1.2.4-TRICHLOROBENZENE	BDL	30
NAPHTHALENE	BDL	30
4-CHLOROANILINE	BDL	30
HEXACHLOROBUTADIENE	BDL	30
4-CHLORO-3-METHYLPHENOL	BDL	30
2-METHYLNAPHTHALENE	BDL	30
HEXACHLOROCYCLOPENTADIENE	BDL	30
2.4.6-TRICHLOROPHENOL	BDL	30
2.4.5-TRICHLOROPHENOL	BDL	150
2-CHLORONAPHTHALENE	BDL	30
2-NITROANILINE	BDL	150
DIMETHYLPHTHALATE	BDL	30
ACENAPHTHYLENE	BDL	30
2.6-DINITROTOLUENE	BDL	75
3-NITROANILINE	BDL	150
ACENAPHTHENE	BDL	30
2.4-DINITROPHENOL	BDL	150

	CONCENTRATION (ug/L)	DETECTION LI (ug/L)
4-NITROPHENOL	BDL	150
DIBENZOFURAN	BDL	30
2.4-DINITROTOLUENE	BDL	75
DIETHYLPHTHALATE	BDL	30
4-CHLOROPHENYL-PHENYLETHER	BDL	30
FLUORENE	BDL	30
4-NITROANILINE	BDL	150
4.6-DINITRO-2-METHYLPHENOL	BDL	150
N-NITROSODIPHENYLAMINE (1)	BDL	30
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	30
4-BROMOPHENYL-PHENYLETHER	BDL	30
HEXACHLOROBENZENE	BDL	30
PENTACHLOROPHENOL	BDL	30
PHENANTHRENE	BDL	30
ANTHRACENE	BDL	30
DI-N-BUTYLPHTHALATE	BDL	30
FLUOROANTHENE	BDL	30
BENZIDENE	BDL	300
PYRENE	BDL	30
BUTYLBENZYLPHTHALATE	BDL	30
3.3-DICHLOROBENZIDINE	BDL	60
BENZO(a)ANTHRACENE	BDL	30
CHRYSENE	BDL	30
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	30
DI-N-OCTYLPHTHALATE	BDL	30
BENZO(b)FLUORANTHENE	BDL	30
BENZO(k)FLUORANTHENE	BDL	30
BENZO(a)PYRENE	BDL	30
IDENO(1.2.3-c.d)PYRENE	BDL	30
DIBENZO(a.h)ANTHRACENE	BDL	30
BENZO(g.h.i)PERYLENE	BDL	30

The high moisture content of this sample resulted in elevated detection limits.

BDL = BELOW DETECTION LIMIT

METHOD REFERENCE: 40 CFR PART 136. FRIDAY. OCTOBER
METHOD 625

HALEY & ALDRICH, INC.
58 Charles Street, Cambridge, Mass.
Tel. 617/494-1606

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2.

H&A FILE NO. L U 0 03 - 41
PROJECT Parcel 18
H&A CONTACT Vico Taliadouros

LABORATORY ESA
ADDRESS 43 Wiggins, Bedford, MA
CONTACT Rosemarie Griffin

DELIVERY DATE 1/18/89
DATE FINAL REPORT DUE normal
PROJECT MANAGER'S INITIALS Joe [illegible] for [illegible]

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	ANALYSES VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	Cyanide	PHIR			NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
B9-S8		1/11/89		15'-17'	Soil	✓			✓	✓						3	
B10-S10		1/10/89		20'-22'	Soil	✓			✓	✓			✓			3	
B10-S11		1/10/87		22'-24'	Soil			✓				✓				1	
B11-S9		1/10/89		17'-19'	Soil	✓		✓	✓	✓			✓			3	
B11-S12		1/10/89		24'-26'	Soil	✓			✓	✓						3	
B11-S1		1/9/89		1'-3'	Soil				✓							1	
B11-S5		1/9/89		9'-11'	Soil	✓				✓						3	
B17-S8		1/9/89		15'-17'	Soil				✓	✓		✓				1	
B17-S2		1/6/89		3'-5'	Soil				✓	✓						1	
B17-S11		1/9/89		21'-23'	Soil				✓	✓						1	

I. Sampled and Relinquished by
Sign David M. Bois
Print David M. Bois
Firm H&A
Date 18 JAN 89 Time 1440

I. Received by
Sign Rosemary Payne
Print ROSEMARY PAYNE
Firm ESA LABS
Date 1/18/89 Time 2:40 P.M.

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☐ No ☐ Yes

If Yes, explain in remarks.

		VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	Cyanide	PHIR		
LIQUID	VOA Vial										
	Glass Bottle										
	Plastic Bottle										
	Preservative										
	Container Volume										
SOLID	VOA Vial										
	Glass Jar										
	Plastic Jar										
	Preservative	A		A	A	A		A	A		
	Container Volume	40 ml		16 oz	16 oz	16 oz		16 oz	16 oz		

Note: Sample bottles supplied by lab, unless indicated.

PRESERVATION KEY: A - Sample chilled,
B - Filtered, C - Acidified with ______
D - NaOH, E - NaThiosulfate, F - Other

REMARKS: (Sample storage, nonstandard sample bottles)

ESAL Job No. : 89-0193
Date Received: 01/18/89
Date Analyzed: 01-24-89

ESAL No. : 89-0193-01   Sample Desc:SOIL, 10003-41, B9-S8

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	111
Toluene-D8	115
Bromofluorobenzene	117

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. No.: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/24/89

Sample No.: 89-0193-01

Sample ID: Soil, 10003-41, B9-S8

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. Number: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/25/89

Sample NO.: 89-0193-03

Sample ID: Soil,10003-41,
B10-S11

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	20	0.04	226.3
Beryllium	0.9	0.1	210.1
Cadmium	ND	0.1	213.1
Chromium	45	1	218.1
Copper	25	0.4	220.1
Lead	5.5	1	239.1
Mercury	ND	0.04	245.1
Nickel	24	0.8	249.1
Selenium	0.38	0.04	270.3
Silver	1.2	0.2	272.1
Thallium	15	2	279.1
Zinc	48	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.. 890193
P.O. Number: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/25/89

Sample NO.: 89-0193-03 Duplicate

Sample ID: Soil,10003-41,
B10-S11

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	23	0.04	226.3
Beryllium	0.9	0.1	210.1
Cadmium	ND	0.1	213.1
Chromium	48	1	218.1
Copper	27	0.4	220.1
Lead	6.0	1	239.1
Mercury	ND	0.04	245.1
Nickel	25	0.8	249.1
Selenium	0.21	0.04	270.3
Silver	1.1	0.2	272.1
Thallium	16	2	279.1
Zinc	57	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. Number: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/25/89

Sample NO.: 89-0193-04

Sample ID: Soil,10003-41, B11-S9

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	7	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	ND	0.1	213.1
Chromium	18	1	218.1
Copper	17	0.4	220.1
Lead	ND	1	239.1
Mercury	ND	0.04	245.1
Nickel	10	0.8	249.1
Selenium	0.14	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	7.5	2	279.1
Zinc	30	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PETROLEUM IDENTIFICATION

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. No.: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/27/89

	TEST DESCRIPTION	METHOD
(O&G):	OIL & GREASE - IR	EPA 413.2
(TPH):	PETROLEUM HC - IR	EPA 418.1
(PETROL. HC):	PETROLEUM HYDROCARBONS	GC-FID

SMP NO.	DESCRIPTION	O&G (MG/KG)	TPH (MG/KG)	PETROL. HC (MG/KG)	PET. ID
01	B9-S8	---	---	130	*
02	B10-S10	95	80	96	*
04	B11-S9	156	100	88	*
05	B11-S12	---	---	85	*
07	B11-S5	---	---	124	*
08	B17-S8	---	---	152	Motor Oil/Gear Oil
09	B17-S2	---	---	176	*
10	B17-S11	---	---	68	*
11	B19-S5	---	---	136	Motor Oil/Gear Oil
12	B19-S9	---	---	77	*

*Weathered petroleum product C13 to C36 as in Motor Oil.

Sample Prep. EPA Method 9071

RECEIVED
APR 27 198
HALEY & ALDRICH, INC.

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 89019
P.O. Number: 10003-4
Date Received: 01/18/89
Date Analyzed: 01/27/89

Sample Description: 89-0193-01

Sample ID: Soil, B9-S8

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	17	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. Number: 10003-41
Date Received: 01/18/8
Date Analyzed: 01/27/8

Sample Description: 89-0193-02

Sample ID: Soil, B10-S10

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. Number: 10003-41
Date Received: 01/18/89
Date Analvzed: 01/27/89

Sample Description: 89-0193-04

Sample ID: Soil, B11-S9

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. Number: 10003-4
Date Received: 01/18/8
Date Analyzed: 01/27/8

Sample Description: 89-0193-05

Sample ID: Soil, B11-S12

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 89019
P.O. Number: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/27/89

Sample Description: 89-0193-06

Sample ID: Soil, B11-S1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	12	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. Number: 10003-41
Date Received: 01/18/89
Date Analyzed: 01/27/89

Sample Description: 89-0193-08

Sample ID: Soil, B17-S8

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

esa

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. Number: 10003-4
Date Received: 01/18/89
Date Analyzed: 01/27/89

Sample Description: 89-0193-09

Sample ID: Soil, B17-S2

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890193
P.O. Number: 10003-4
Date Received: 01/18/8
Date Analyzed: 01/27/89

Sample Description: 89-0193-10

Sample ID: Soil, B17-S11

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	15	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	15	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4.4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

RAI

Resource Analysts, Inc
Subsidiary of MILLIPORE
P.O. Box 778, One Lafayette Road
Hampton, N.H. 03842
(603) 926-7777

To:

Ms. Joyce Weinfurt
ESA Laboratories, Inc
43 Wiggins Ave
Bedford, MA 01730

Project # 10003-41

P.O. Number: L890116
Date Received: 01/24/89 (1655)
Lab Number: 16,052
Date Reported: 02/03/89

Attached please find test results for base/neutral extractable organic compounds.

Parameter: Total Cyanide (ug/g)   Matrix: Solid
Date Analyzed: 01/31/89
Method/Reference: 335.2/40 CFR Part 136, Friday, October 26, 1984

Field Identification	Laboratory Number	Concentration
88-0193-03 (B.C-511)	16,052-1	<0.8
88-0193-08 (BL3 [illegible])	16,052-2	<0.7
88-0193-13 ([illegible])	16,052-3	<0.6

OR

Results expressed on a dry weight basis.

Parameter: Total Cyanide (mg/L)   Matrix: Water
Date Analyzed: 01/31/89
Method/Reference: 335.2/40 CFR Part 136, Friday, October 26, 1984

Field Identification	Laboratory Number	Concentration
88-0193-14	16,052-5	<0.01

Technical Director

2/3/89
Date

Haley & Aldrich, Inc.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2.

H&A FILE NO. 10003-91
PROJECT PARCEL 18
H&A CONTACT Kleo Talidouros

LABORATORY ESA
ADDRESS 43 Wissins Ave Bellow
CONTACT Reginald Griffin

DELIVERY DATE 1 DEC 88
DATE FINAL REPORT DUE 2 weeks 14 DEC 88
PROJECT MANAGER'S NAME Joe [illegible]

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID	O&G	EP TOX	CYANIDE			NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
TP1, S-1		28 NOV 88	0945	14-14.5	Soil	X	X	X	X	X	X	X				7	
TP2, S-1		28 NOV 88	1130	16-17	Soil	X		X	X	X	X					5	
TP3, S-2		28 NOV 88	1330	15-16	Soil	X	X	X	X	X	X	X	X			8	
TP4 S-1		29 NOV 88	1445	17-17.5	Soil	X	X	X	X	X	X	X	X			8	
TP5 S-1		29 NOV 88	08:45	16-16.5	Soil	X		X		X	X					3	
TP7, S-1		30 NOV 88	0930	14-16	Soil	X	X	X	X	X	X	X	X			5	HNU = 180 ppm
TP8, S-1		29 NOV 88	1000	15.5-16.5	Soil	X		X	X	X	X	X				6	
TP9, S-1		29 NOV 88	1440	14-16	Soil	X		X		X	X					4	HNU = 140 ppm
TP10, S-1		30 NOV 88	1340	14-16	Soil	X		X		X	X					3	
TP101, S-1		28 NOV 88	0945	14-14.5	Soil	X		X	X	X	X					6	
TP701, S-1		30 NOV 88	0930	14-16	Soil	X	X	X	X	X	X	X	X			5	HNU = 180 ppm

		VOA	ABN	METALS	PEST/PCB	PET. ID	O&G	EP TOX	CYANIDE		
LIQUID	VOA Vial										
	Glass Bottle										
	Plastic Bottle										
	Preservative										
	Container Volume										
SOLID	VOA Vial	X									
	Glass Jar		X	X	X	X	X	X	X		
	Plastic Jar										
	Preservative	A	A	A	A	A	A	A	A		
	Container Volume	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		

Note: Sample bottles supplied by lab, unless indicated.

REMARKS: (Sample storage, nonstandard sample bottles)

I. Sampled and Relinquished by
Sign Robert W. Wilhelm II
Print Robert W. Wilhelm II
Firm H+A
Date 1 DEC 88 Time 1550

I. Received by
Sign Paul G Ulloa
Print PAUL A ULLOA
Firm ESA
Date 12-1-88 Time 15:30

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☑ No ☐ Yes
If Yes, explain in remarks.

PRESERVATION KEY: A - Sample chilled, B - Filtered, C - Acidified with ______ D - NaOH, E - NaThiosulfate F - Other

Haley & Aldrich, Inc.

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

H&A FILE NO. 10003-41
PROJECT PARCEL 13
H&A CONTACT Kleo Taliclouros

LABORATORY ESA
ADDRESS 43 Wiggins Ave, Bedford
CONTACT

DELIVERY DATE 1 DEC 88
DATE FINAL REPORT DUE 2 weeks 19 Dec 88
PROJECT MANAGER'S NAME Joe Campisi

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH (feet)	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	EP TOX	CYANIDE			NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
TP11, S-1		30 NOV 88		15-17	Soil	X		X	X	X	X	X				4	
TP12, S-1		30 NOV 88		16-18	Soil	X		X	X	X	X					4	HNU = 140 ppm
TP15, S-1		30 NOV 88		9-10	Soil	X		X	X	X	X		X			5	HNU = 50 ppm
TP21, S-2		29 NOV 88		14-16	Soil	X		X		X	X		X			4	HNU = 210 ppm

I. Sampled and Relinquished by
Sign Robert W. Wilhelm II
Print Robert W. Wilhelm II
Firm Haley & Aldrich, Inc.
Date 1 Dec 88 Time 1550

I. Received by
Sign Paul A Ulloccs
Print PAUL A ULLOCCS
Firm ESA L
Date 12-1-88 Time 15:50

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☒ No ☐ Yes

If Yes, explain in remarks.

		VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	EP TOX	CYANIDE		
LIQUID	VOA Vial										
	Glass Bottle										
	Plastic Bottle										
	Preservative										
	Container Volume										
SOLID	VOA Vial	X									
	Glass Jar			X	X	X	X	X	X		
	Plastic Jar										
	Preservative	A		A	A	A	A	A	A		
	Container Volume	40 mL		8 oz 8 oz	8 oz 16 oz	8 oz 16 oz	8 oz 16 oz	8 oz 16 oz	4 oz 16 oz		

Note: Sample bottles supplied by lab, unless indicated.

REMARKS: (Sample storage, nonstandard sample bottles)

PRESERVATION KEY: A - Sample chilled.
B - Filtered, C - Acidified with
D - NaOH E - NaThiosulfate F - Other

HALEY & ALDRICH, INC.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

H&A FILE NO. 1 0 0 0 3 4 T
PROJECT Parcel 18
H&A CONTACT Kleo Taliadouros

LABORATORY ESA
ADDRESS Bedford, MA
CONTACT

DELIVERY DATE 12/2/88
DATE FINAL REPORT DUE 5 weeks
PROJECT MANAGER'S INITIALS Joe Campisi

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	VOA	ABN	METALS ②	PEST/PCB	PET. ID ①	O & C	EP ToX				NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
TP13-S1		12/1/88	0930	15-17'	soil	X		X		X						4	
TP14A-S1		12/1/88	0930	14-16'	soil	X		X		X						4	
TP16-S1		12/1/88	1145	11-14'	soil	X	X	X	X	X		X				7	
TP16-S2		12/1/88	1230	7-9'	soil					X						1	
TP17-S1		12/1/88	1045	17-19'	soil	X		X	X	X						5	

I. Sampled and Relinquished by
Sign Robert J Kuchl
Print Robert J Kullam
Firm Haley & Aldrich, Inc
Date 12/2/88 Time 1:30

I. Received by
Sign Paul A Ulluc
Print PAUL A. ULLUCCI
Firm ESA Ltd
Date 12-2-88 Time 3:20PM

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☒ No ☐ Yes

If Yes, explain in remarks.

		VOA	ABN	METALS	PEST/PCB	PET. ID	O & C	EP ToX			
LIQUID	VOA Vial										
	Glass Bottle										
	PlasticBottle										
	Preservative										
	Container Volume										
SOLID	VOA Vial	X									
	Glass Jar		X	X	X	X		X			
	Plastic Jar										
	Preservative	A	A	A	A	A		A			
	Container Volume	40 ml	8oz 16oz	8oz 16 oz	8oz 16oz	8oz 16 oz		8oz 16 oz			

Note: Sample bottles supplied by lab, unless indicated

PRESERVATION KEY: A - Sample chilled,
B - Filtered, C - Acidified with
D - NaOH, E - NaThiosulfate, F - Other

REMARKS: (Sample storage, nonstandard sample bottles)

① Pet I D with Quantification

② 13 Priority Pollutant Metals

HALEY & ALDRICH, INC.

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

H&A FILE NO. 1 0 0 0 3 4 1
PROJECT Pier 18
H&A CONTACT Klee Taludewas

LABORATORY ESA
ADDRESS Bedford, MA
CONTACT P

DELIVERY DATE 12/2/83
DATE FINAL REPORT DUE 3 weeks
PROJECT MANAGER'S INITIALS J. Cooper

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH (OTC)	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID	O&G	EP Tox	Tot Car			NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
TP 6-S1		12/2/83	1300	13-16'	soil	X	X	X	X	X		X	X			6	
TP 18-S1		12/2/83	0800	12-14.3	soil	X	X	X	X	X			X			5	
TP 19-S1		12/2/83	0845	13.5-15.5'	soil	X		X		X						4	
TP 20-S1		12/2/83	1000	15-17	soil	X		X	X	X						4	
TP 18-S3		12/2/83	0800	~~0-1~~ 13-14	soil	X		X	X	X		X				4	
B1-GW		12/2/83	0730	—	water	X										2	

I. Sampled and Relinquished by
Sign Richard J. Rickham
Print Richard J. Rickham
Firm Haley & Aldrich, Inc.
Date 12/2/83 Time 1500

II. Relinquished by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

I. Received by
Sign Paul A Pellucci
Print PAUL A PELLUCCI
Firm ESA Lab
Date 12-2/83 Time 3:36PM

II. Received by
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Date Time

III. Received by
Sign
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Firm
Date Time

IV Received by
Sign
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Firm
Date Time

		VOA	ABN	METALS	PEST/PCB	PET. ID	O&G	EP Tox	Tot Car		
LIQUID	VOA Vial	A									
	Glass Bottle										
	Plastic Bottle										
	Preservative	A							1		
	Container Volume	40 ml									
SOLID	VOA Vial	X									
	Glass Jar										
	Plastic Jar										
	Preservative	A									
	Container Volume	40 ml									

Note: Sample bottles supplied by lab, unless indicated

PRESERVATION KEY: A - Sample chilled, B - Filtered, C - Acidified with ________ D - NaOH, E - NaThiosulfate F - Other

REMARKS: (Sample storage, nonstandard sample bottles)
(1) Pet ID w/ Quantification

Evidence Samples tampered with? ☑ No ☐ Yes

If Yes, explain in remarks.

esa Laboratories, Inc.

43 WIGGINS AVENUE
BEDFORD, MA. 01730
617-275-0100 • TELEX: 923344
TELECOPIER: (617) 275-5529

KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02141

ESAL Job No.: 88-4742
P.O. Number: 10003-41
Date Received: 12/01/88
Date Reported: 12/16/88

SUBJECT: 10003-41, PARCEL 18

Your samples which you submitted for analysis on 12/01/88 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Richard R. Keenan

Richard R. Keenan, Ph.D., CIH
Laboratory Director

Encl.

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/13/88

ESAL No. : 88-4742-01   Sample Desc:SOIL, 10003-41, TP-1 S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	100
Toluene-D8	101
Bromofluorobenzene	107

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

Sample No.: 88-4742-01

Sample ID: Soil, 10003-41; TP1, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

esa

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/12/88

ESAL No. : 88-4742-02 Sample Desc:SOIL 10003-41, TP-2, S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	113
Toluene-D8	107
Bromofluorobenzene	111

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample No.: 88-4742-02

Sample ID: Soil, 10003-41; TP2, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS),
Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

esa

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/12/88

ESAL No. : 88-4742-03 Sample Desc:SOIL, 10003-41, TP-3, S-2

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	109
Toluene-D8	107
Bromofluorobenzene	108

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample No.: 88-4742-03

Sample ID: Soil, 10003-41; TP3, S-2

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/12/88

ESAL No. : 88-4742-04 Sample Desc:SOIL, 10003-41 TP-4, S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	105
Toluene-D8	110
Bromofluorobenzene	104

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

Sample No.: 88-4742-04

Sample ID: Soil, 10003-41; TP4, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

esa

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/12/88

ESAL No. : 88-4742-05   Sample Desc:SOIL, 10003-41, TP-5, S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	111
Toluene-D8	107
Bromofluorobenzene	102

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

Sample No.: 88-4742-05

Sample ID: Soil, 10003-41; TP5, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/13/88

ESAL No. : 88-4742-06   Sample Desc:SOIL, 10003-41, TP-7, S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	33
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	23
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	540
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	3900
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	84
Tetrachloroethylene	ND
Toluene	34
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	41
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	126
Toluene-D8	97
Bromofluorobenzene	100

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

Sample No.: 88-4742-06

Sample ID: Soil, 10003-41; TP7, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	6700

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/12/88

ESAL No. : 88-4742-07 Sample Desc:SOIL, 10003-41 TP-8, S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	29
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	120
Toluene-D8	76
Bromofluorobenzene	78

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

Sample No.: 88-4742-07

Sample ID: Soil, 10003-41; TP8, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	140

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/13/88

ESAL No. : 88-4742-08   Sample Desc:SOIL, 10003-41, TP-9 S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	103
Toluene-D8	110
Bromofluorobenzene	107

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample No.: 88-4742-08

Sample ID: Soil, 10003-41; TP9, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/13/88

ESAL No. : 88-4742-09   Sample Desc:SOIL, 10003-41 TP10, S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	91
Toluene-D8	110
Bromofluorobenzene	100

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

Sample No.: 88-4742-09

Sample ID: Soil, 10003-41; TP10, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	52.9

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

esa

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/13/88

ESAL No. : 88-4742-10   Sample Desc. :SOIL, 10003-41,TP101 S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	97
Toluene-D8	119
Bromofluorobenzene	101

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

Sample No.: 88-4742-10 Sample ID: Soil, 10003-41; TP101, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

esa

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/13/88

ESAL No. : 88-4742-11 Sample Desc. :SOIL, 10003-41,TP701 S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	3000
Methylene chloride	ND
1,1 2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	23
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	95
Toluene-D8	112
Bromofluorobenzene	107

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <20 ug/kg

HSL COMPOUNDS

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

Sample No.: 88-4742-11

Sample ID: Soil, 10003-41; TP701, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	6700

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/13/88

ESAL No. : 88-4742-12 Sample Desc. :SOIL, 10003-41 TP11, S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1 2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	99
Toluene-D8	111
Bromofluorobenzene	107

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample No.: 88-4742-12 Sample ID: Soil, 10003-41; TP11, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/13/88

ESAL No. : 88-4742-13   Sample Desc. :SOIL, 10003-41, TP12 S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	100
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	23
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	100
Toluene-D8	113
Bromofluorobenzene	107

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

Sample No.: 88-4742-13   Sample ID: Soil, 10003-41; TP12, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	120

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/13/88

ESAL No. : 88-4742-14   Sample Desc. :SOIL, 10003-41   TP15   S-1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	98
Toluene-D8	113
Bromofluorobenzene	116

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

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ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample No.: 88-4742-14

Sample ID: Soil, 10003-41; TP15, S-1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/13/88

ESAL No. : 88-4742-15   Sample Desc. :SOIL, 10003-41, TP21, S-2

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	570
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	96
Toluene-D8	109
Bromofluorobenzene	104

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample No.: 88-4742-15 Sample ID: Soil, 10003-41; TP21, S-2

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	1500

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

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ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/12/88

ESAL No. : MB1212R1 Sample Desc. : Soil, Method Blank

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	4
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	109
Toluene-D8	103
Bromofluorobenzene	104

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample No.: 88-4742

Sample ID: Soil, MB1212R1, Method Blank

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

esa

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/13/88

ESAL No. : MB1213R2   Sample Desc. : Soil, Method Blank

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	3
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	100
Toluene-D8	109
Bromofluorobenzene	106

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

ESAL Job No.: 88-4742
P.O. No.: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

Sample No.: MB1213R2

Sample ID: Soil, Method Blank

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4742
Date Received: 12/01/88
Date Analyzed: 12/13/88

Sample Description 474215MS   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1,1-Dichloroethylene	86	59-172
Trichloroethylene	124	62-137
Chlorobenzene	113	60-133
Toluene	119	59-139
Benzene	104	66-142

Method Volatile Organic Analysis, EPA Method 8240 (GC/MS)

Recovery limits are EPA CLP guidelines

esa Laboratories, Inc.

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KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02141

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12/01/88
Date Reported: 12/16/88

SUBJECT: 10003-41; PARCEL 18

Your samples which you submitted for analysis on 12/01/88 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Richard R Keenan

Richard R. Keenan,Ph.D.,CIH
Laboratory Director

Encl.

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-01

Sample ID: Soil, 10003-41; TP1,S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	2.6	0.04	226.3
Beryllium	0.4	0.1	210.1
Cadmium	0.9	0.1	213.1
Chromium	14	1.0	218.1
Copper	26	0.4	220.1
Lead	6.2	1	239.1
Mercury	0.04	0.04	245.1
Nickel	17	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	6.0	2	279.1
Zinc	46	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-02   Sample ID: Soil, 10003-41; TP2,S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	3.5	0.04	226.3
Beryllium	0.4	0.1	210.1
Cadmium	0.8	0.1	213.1
Chromium	14	1.0	218.1
Copper	31	0.4	220.1
Lead	3.6	1	239.1
Mercury	ND	0.04	245.1
Nickel	15	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	6.6	2	279.1
Zinc	30	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable   LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-03 Sample ID: Soil, 10003-41; TP3,~~8-1~~ 52

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	3.7	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	1.0	0.1	213.1
Chromium	17	1.0	218.1
Copper	27	0.4	220.1
Lead	9.8	1	239.1
Mercury	ND	0.04	245.1
Nickel	20	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	8.6	2	279.1
Zinc	51	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-04

Sample ID: Soil, 10003-41; TP4,S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	3.0	0.04	226.3
Beryllium	0.4	0.1	210.1
Cadmium	0.7	0.1	213.1
Chromium	14	1.0	218.1
Copper	15	0.4	220.1
Lead	2.7	1	239.1
Mercury	0.09	0.04	245.1
Nickel	15	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	6.0	2	279.1
Zinc	27	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-05

Sample ID: Soil, 10003-41; TP5,S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	4.4	0.04	226.3
Beryllium	0.4	0.1	210.1
Cadmium	0.9	0.1	213.1
Chromium	16	1.0	218.1
Copper	31	0.4	220.1
Lead	40	1	239.1
Mercury	0.24	0.04	245.1
Nickel	18	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	7.8	2	279.1
Zinc	62	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-06

Sample ID: Soil, 10003-41; TP7,S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	3.0	0.04	226.3
Beryllium	0.3	0.1	210.1
Cadmium	0.8	0.1	213.1
Chromium	12	1.0	218.1
Copper	19	0.4	220.1
Lead	14	1	239.1
Mercury	0.06	0.04	245.1
Nickel	15	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	7.0	2	279.1
Zinc	31	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-07

Sample ID: Soil, 10003-41; TP8,S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	3.7	0.04	226.3
Beryllium	0.4	0.1	210.1
Cadmium	0.8	0.1	213.1
Chromium	13	1.0	218.1
Copper	21	0.4	220.1
Lead	16	1	239.1
Mercury	0.05	0.04	245.1
Nickel	16	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	5.2	2	279.1
Zinc	37	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES. INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-08 Sample ID: Soil, 10003-41; TP9,S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	3.8	0.04	226.3
Beryllium	0.4	0.1	210.1
Cadmium	0.8	0.1	213.1
Chromium	13	1.0	218.1
Copper	18	0.4	220.1
Lead	11	1	239.1
Mercury	ND	0.04	245.1
Nickel	15	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	5.6	2	279.1
Zinc	30	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-09

Sample ID: Soil, 10003-41;
TP10, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	4.6	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	0.9	0.1	213.1
Chromium	21	1.0	218.1
Copper	17	0.4	220.1
Lead	17	1	239.1
Mercury	0.08	0.04	245.1
Nickel	21	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	6.8	2	279.1
Zinc	35	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-10

Sample ID: Soil, 10003-41;
TP101, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	4.8	0.04	226.3
Beryllium	0.6	0.1	210.1
Cadmium	1.1	0.1	213.1
Chromium	24	1.0	218.1
Copper	34	0.4	220.1
Lead	18	1	239.1
Mercury	ND	0.04	245.1
Nickel	27	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.8	0.2	272.1
Thallium	9.2	2	279.1
Zinc	50	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-11

Sample ID: Soil, 10003-41;
TP701, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	3.4	0.04	226.3
Beryllium	0.3	0.1	210.1
Cadmium	0.9	0.1	213.1
Chromium	17	1.0	218.1
Copper	23	0.4	220.1
Lead	35	1	239.1
Mercury	0.09	0.04	245.1
Nickel	20	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.06	0.2	272.1
Thallium	6.2	2	279.1
Zinc	40	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

FP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-12 Sample ID: Soil, 10003-41; TP11, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	2.7	0.04	226.3
Beryllium	0.2	0.1	210.1
Cadmium	0.6	0.1	213.1
Chromium	11	1.0	218.1
Copper	14	0.4	220.1
Lead	2.8	1	239.1
Mercury	ND	0.04	245.1
Nickel	14	0.8	249.1
Selenium	ND	0.04	270.3
Silver	ND	0.2	272.1
Thallium	6.0	2	279.1
Zinc	33	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-13

Sample ID: Soil, 10003-41; TP12, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	4.9	0.04	226.3
Beryllium	0.3	0.1	210.1
Cadmium	0.9	0.1	213.1
Chromium	15	1.0	218.1
Copper	19	0.4	220.1
Lead	6.6	1	239.1
Mercury	0.04	0.04	245.1
Nickel	18	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	6.2	2	279.1
Zinc	30	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-14

Sample ID: Soil, 10003-41; TP15, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	5.4	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	1.2	0.1	213.1
Chromium	18	1.0	218.1
Copper	36	0.4	220.1
Lead	158	1	239.1
Mercury	2.44	0.04	245.1
Nickel	23	0.8	249.1
Selenium	0.2	0.04	270.3
Silver	1.2	0.2	272.1
Thallium	8.4	2	279.1
Zinc	286	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

FP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-15

Sample ID: Soil, 10003-41; TP21, S-2

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	4.2	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	1.0	0.1	213.1
Chromium	20	1.0	218.1
Copper	26	0.4	220.1
Lead	16	1	239.1
Mercury	0.08	0.04	245.1
Nickel	22	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	8.0	2	279.1
Zinc	44	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-9 Sample ID: Replicate

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	4.9	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	1.1	0.1	213.1
Chromium	27	1.0	218.1
Copper	19	0.4	220.1
Lead	12	1	239.1
Mercury	0.05	0.04	245.1
Nickel	24	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	8.4	2	279.1
Zinc	38	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-12 Sample ID: Replicate

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	2.1	0.04	226.3
Beryllium	0.2	0.1	210.1
Cadmium	0.7	0.1	213.1
Chromium	11	1.0	218.1
Copper	15	0.4	220.1
Lead	6	1	239.1
Mercury	ND	0.04	245.1
Nickel	15	0.8	249.1
Selenium	ND	0.04	270.3
Silver	ND	0.2	272.1
Thallium	6.0	2	279.1
Zinc	40	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

EPTOX

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 88-4743
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample Description: 88-4743-01 Sample ID: Soil, 10003-41; TP1, S-1

Analyte	Result (mg/L)	LOD (mg/L)	Method
Arsenic	ND	0.002	226.3
Barium	ND	0.1	208.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.05	218.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1

ND = Nondetectable LOD = Limit of Detection

Method: Atomic Absorption Spectrophotometry

ESA LABORATORIES, INC.

EPTOX

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 88-4743
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample Description: 88-4743-03 Sample ID: Soil, 10003-41; TP3, S-2

Analyte	Result (mg/L)	LOD (mg/L)	Method
Arsenic	ND	0.002	226.3
Barium	ND	0.1	208.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.05	218.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1

ND = Nondetectable LOD = Limit of Detection

Method: Atomic Absorption Spectrophotometry

ESA LABORATORIES, INC.

EPTOX

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 88-4743
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample Description: 88-4743-04   Sample ID: Soil, 10003-41; TP4, S-1

Analyte	Result (mg/L)	LOD (mg/L)	Method
Arsenic	ND	0.002	226.3
Barium	ND	0.1	208.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.05	218.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1

ND = Nondetectable   LOD = Limit of Detection

Method: Atomic Absorption Spectrophotometry

ESA LABORATORIES, INC.

EPTOX

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 88-4743
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample Description: 88-4743-06 Sample ID: Soil, 10003-41; TP7, S-1

Analyte	Result (mg/L)	LOD (mg/L)	Method
Arsenic	0.007	0.002	226.3
Barium	0.12	0.1	208.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.05	218.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1

ND = Nondetectable LOD = Limit of Detection

Method: Atomic Absorption Spectrophotometry

ESA LABORATORIES, INC.

EPTOX

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 88-4743
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample Description: 88-4743-07 Sample ID: Soil, 10003-41; TP8, S-1

Analyte	Result (mg/L)	LOD (mg/L)	Method
Arsenic	ND	0.002	226.3
Barium	ND	0.1	208.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.05	218.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1

ND = Nondetectable LOD = Limit of Detection

Method: Atomic Absorption Spectrophotometry

ESA LABORATORIES, INC.

EPTOX

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 88-4743
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample Description: 88-4743-11 Sample ID: Soil, 10003-41; TP701, S-1

Analyte	Result (mg/L)	LOD (mg/L)	Method
Arsenic	0.008	0.002	226.3
Barium	ND	0.1	208.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.05	218.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1

ND = Nondetectable LOD = Limit of Detection

Method: Atomic Absorption Spectrophotometry

ESA LABORATORIES, INC.

EPTOX

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 88-4743
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/15/88

Sample Description: 88-4743-12   Sample ID: Soil, 10003-41; TP11, S-1

Analyte	Result (mg/L)	LOD (mg/L)	Method
Arsenic	ND	0.002	226.3
Barium	ND	0.1	208.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.05	218.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1

ND = Nondetectable   LOD = Limit of Detection

Method: Atomic Absorption Spectrophotometry

esa Laboratories, Inc.

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KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02141

ESAL Job No.: 88-4771
P.O. Number: 10003-41
Date Received: 12/02/88
Date Reported: 12/16/88

SUBJECT: 10003-41; Parcel 18; EPTOX and Priority Pollutant Metals

Your samples which you submitted for analysis on 12/02/88 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Richard R. Keenan

Richard R. Keenan, Ph.D., CIH
Laboratory Director

Encl.

AN ESA COMPANY

ESA LABORATORIES, INC.

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KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4771
P.O. Number: 10003-41
Date Received: 12-02-88
Date Analyzed: 12-15-88

Sample No.: 88-4771-01

Sample ID: Soil, 10003-41;
TP6, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	12	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	1.0	0.1	213.1
Chromium	24	0.1	218.1
Copper	30	0.4	220.1
Lead	154	1	239.1
Mercury	0.23	0.004	245.1
Nickel	21	0.8	249.1
Selenium	0.11	0.04	270.3
Silver	1.0	0.2	272.1
Thallium	8.0	2	279.1
Zinc	126	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4771
P.O. Number: 10003-41
Date Received: 12-02-88
Date Analyzed: 12-15-88

Sample No.: 88-4771-02

Sample ID: Soil, 10003-41; TP18, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	3.2	0.04	226.3
Beryllium	0.4	0.1	210.1
Cadmium	0.9	0.1	213.1
Chromium	15	0.1	218.1
Copper	27	0.4	220.1
Lead	44	1	239.1
Mercury	0.15	0.004	245.1
Nickel	17	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	8.0	2	279.1
Zinc	74	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

FP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4771
P.O. Number: 10003-41
Date Received: 12-02-88
Date Analyzed: 12-15-88

Sample No.: 88-4771-03

Sample ID: Soil, 10003-41;
TP19, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	1.9	0.04	226.3
Beryllium	0.2	0.1	210.1
Cadmium	0.7	0.1	213.1
Chromium	12	0.1	218.1
Copper	14	0.4	220.1
Lead	3.2	1	239.1
Mercury	ND	0.004	245.1
Nickel	13	0.8	249.1
Selenium	ND	0.04	270.3
Silver	ND	0.2	272.1
Thallium	5.2	2	279.1
Zinc	24	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4771
P.O. Number: 10003-41
Date Received: 12-02-88
Date Analyzed: 12-15-88

Sample No.: 88-4771-04

Sample ID: Soil, 10003-41;
TP20, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	2.5	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	0.9	0.1	213.1
Chromium	16	0.1	218.1
Copper	26	0.4	220.1
Lead	13	1	239.1
Mercury	0.05	0.004	245.1
Nickel	19	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.8	0.2	272.1
Thallium	6.8	2	279.1
Zinc	43	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

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ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4771
P.O. Number: 10003-41
Date Received: 12-02-88
Date Analyzed: 12-15-88

Sample No.: 88-4771-06

Sample ID: Soil, 10003-41; TP13, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	3.7	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	1.0	0.1	213.1
Chromium	22	0.1	218.1
Copper	28	0.4	220.1
Lead	48	1	239.1
Mercury	ND	0.004	245.1
Nickel	21	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	8.8	2	279.1
Zinc	46	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable   LOD = Limit of Detection

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ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4771
P.O. Number: 10003-41
Date Received: 12-02-88
Date Analyzed: 12-15-88

Sample No.: 88-4771-07

Sample ID: Soil, 10003-41;
TP14A, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	3.4	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	1.0	0.1	213.1
Chromium	18	0.1	218.1
Copper	30	0.4	220.1
Lead	7.4	1	239.1
Mercury	ND	0.004	245.1
Nickel	21	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.8	0.2	272.1
Thallium	7.8	2	279.1
Zinc	41	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4771
P.O. Number: 10003-41
Date Received: 12-02-88
Date Analyzed: 12-15-88

Sample No.: 88-4771-08

Sample ID: Soil, 10003-41: TP16, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	24	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	1.3	0.1	213.1
Chromium	25	0.1	218.1
Copper	180	0.4	220.1
Lead	494	1	239.1
Mercury	0.9	0.004	245.1
Nickel	24	0.8	249.1
Selenium	1.0	0.04	270.3
Silver	1.6	0.2	272.1
Thallium	7.2	2	279.1
Zinc	168	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4771
P.O. Number: 10003-41
Date Received: 12-02-88
Date Analyzed: 12-15-88

Sample No.: 88-4771-09

Sample ID: Soil, 10003-41; TP17, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	14	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	1.7	0.1	213.1
Chromium	20	0.1	218.1
Copper	94	0.4	220.1
Lead	640	1	239.1
Mercury	1.48	0.004	245.1
Nickel	19	0.8	249.1
Selenium	1.2	0.04	270.3
Silver	0.9	0.2	272.1
Thallium	8.0	2	279.1
Zinc	308	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4771
P.O. Number: 10003-41
Date Received: 12-02-88
Date Analyzed: 12-15-88

Sample No.: 88-4771-05

Sample ID: Soil, 10003-41;
TP18, S-3

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	3.6	0.04	226.3
Beryllium	0.4	0.1	210.1
Cadmium	1.0	0.1	213.1
Chromium	21	0.1	218.1
Copper	26	0.4	220.1
Lead	3.0	1	239.1
Mercury	0.09	0.004	245.1
Nickel	19	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	8.2	2	279.1
Zinc	57	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4771
P.O. Number: 10003-41
Date Received: 12-02-88
Date Analyzed: 12-15-88

Sample No.: 88-4771-03 Duplicate

Sample ID: Soil, 10003-41:
TP19, S-1

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	2.4	0.04	226.3
Beryllium	0.3	0.1	210.1
Cadmium	0.7	0.1	213.1
Chromium	12	0.1	218.1
Copper	15	0.4	220.1
Lead	3.0	1	239.1
Mercury	ND	0.004	245.1
Nickel	15	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	6.2	2	279.1
Zinc	25	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

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ESA LABORATORIES, INC.

EPTOX

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 88-4771
P.O. Number: 10003-41
Date Received: 12/02/88
Date Analyzed: 12/15/88

Sample Description: 88-4771-01 Sample ID: Soil, 10003-41; TP6,S-1

Analyte	Result (mg/L)	LOD (mg/L)	Method
Arsenic	0.04	0.002	226.3
Barium	ND	0.1	208.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.05	218.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1

ND = Nondetectable LOD = Limit of Detection

Method: Atomic Absorption Spectrophotometry

ESA LABORATORIES, INC.

EPTOX

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 88-4771
P.O. Number: 10003-41
Date Received: 12/02/88
Date Analyzed: 12/15/88

Sample Description: 88-4771-08

Sample ID: Soil, 10003-41;
TP16, S-1

Analyte	Result (mg/L)	LOD (mg/L)	Method
Arsenic	0.01	0.002	226.3
Barium	0.14	0.1	208.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.05	218.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1

ND = Nondetectable

LOD = Limit of Detection

Method: Atomic Absorption Spectrophotometry

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EPTOX

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 88-4771
P.O. Number: 10003-41
Date Received: 12/02/88
Date Analyzed: 12/15/88

Sample Description: 88-4771-05

Sample ID: Soil, 10003-41;
TP18, S-3

Analyte	Result (mg/L)	LOD (mg/L)	Method
Arsenic	0.007	0.002	226.3
Barium	ND	0.1	208.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.05	218.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1

ND = Nondetectable

LOD = Limit of Detection

Method: Atomic Absorption Spectrophotometry

esa Laboratories, Inc.

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KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02142

ESAL Job No.: 88-4769
P.O. Number: 10003-41
Date Received: 12/05/88
Date Reported: 12/20/88

SUBJECT: 10003-41; Parcel 18; Volatile Organic Compounds

Your samples which you submitted for analysis on 12/05/88 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Richard R. Keenan

Richard R. Keenan Ph.D.,CIH
Laboratory Director

Encl.

esa

ESAL Job No. : 88-4769
Date Received: 12/05/88
Date Analyzed: 12-14-88

ESAL No. : 88-4769-01   Sample Desc:10003-41 TP6-S1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	270
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	41.1
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	108
Toluene-D8	117
Bromofluorobenzene	104

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4769
P.O. No.: 10003-41
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample No.: 88-4769-01

Sample ID: 10003-41, TP6-S1

Analyte	Result (ug/kg)
Acetone	210
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	680

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4769
Date Received: 12/05/88
Date Analyzed: 12-14-88

ESAL No. : 88-4769-02   Sample Desc:10003-41, TP18-S1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	94
Toluene-D8	112
Bromofluorobenzene	101

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4769
P.O. No.: 10003-41
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample No.: 88-4769-02

Sample ID: 10003-41, TP18-S1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4769
Date Received: 12/05/88
Date Analyzed: 12-14-88

ESAL No. : 88-4769-03   Sample Desc:10003-41, TP19-S1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	27.9
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	102
Toluene-D8	109
Bromofluorobenzene	109

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4769
P.O. No.: 10003-41
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample No.: 88-4769-03

Sample ID: 10003-41, TP19-S1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

esa

ESAL Job No. : 88-4769
Date Received: 12/05/88
Date Analyzed: 12-14-88

ESAL No. : 88-4769-04 Sample Desc:10003-41 TP20-S1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	107
Toluene-D8	124
Bromofluorobenzene	88

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4769
P.O. No.: 10003-41
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample No.: 88-4769-04

Sample ID: 10003-41, TP20-S1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4769
Date Received: 12/05/88
Date Analyzed: 12-14-88

ESAL No. : 88-4769-05   Sample Desc:10003-41,TP18-S3

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	100
Toluene-D8	115
Bromofluorobenzene	91

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4769
P.O. No.: 10003-41
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample No.: 88-4769-05

Sample ID: 10003-41, TP18-S3

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4769
Date Received: 12/05/88
Date Analyzed: 12-14-88

ESAL No. : 88-4769-06 Sample Desc:10003-41, TP13-S1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1 2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	17.0
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	111
Toluene-D8	118
Bromofluorobenzene	97

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <10 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4769
P.O. No.: 10003-41
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample No.: 88-4769-06

Sample ID: 10003-41, TP13-S1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <25 ug/kg

ND = Nondetectable

esa

ESAL Job No. : 88-4769
Date Received: 12/05/88
Date Analyzed: 12-14-88

ESAL No. : 88-4769-07 Sample Desc:10003-41, TP14A-S1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	115
Toluene-D8	118
Bromofluorobenzene	95

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4769
P.O. No.: 10003-41
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample No.: 88-4769-07

Sample ID: 10003-41, TP14A-S1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

esa

ESAL Job No. : 88-4769
Date Received: 12/05/88
Date Analyzed: 12-14-88

ESAL No. : 88-4769-08   Sample Desc:10003-41, TP16-S1

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	33.4
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	113
Toluene-D8	112
Bromofluorobenzene	97

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4769
P.O. No.: 10003-41
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample No.: 88-4769-08

Sample ID: 10003-41, TP16-S1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	80.1

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

esa

ESAL Job No. : 88-4769
Date Received: 12/05/88
Date Analyzed: 12-14-88

ESAL No. : 88-4769-09   Sample Desc:10003-41, TP17-S1

Analyte	Result(ug/kg)
Benzene	49.5
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	89
Toluene-D8	97
Bromofluorobenzene	93

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <20 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4769
P.O. No.: 10003-41
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample No.: 88-4769-09

Sample ID: 10003-41, TP17-S1

Analyte	Result (ug/kg)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <50 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4769
Date Received: 12/05/88
Date Analyzed: 12-14-88

ESAL No. : 88-4769-10 Sample Desc. :10003-41, 101 OW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	119
Toluene-D8	112
Bromofluorobenzene	98

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4769
P.O. No.: 10003-41
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample No.: 88-4769-10

Sample ID: 10003-41, 101 OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No. : 88-4769
Date Received: 12/05/88
Date Analyzed: 12-14-88

ESAL No. : MB1214R1   Sample Desc. : Soil, Method Blank

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	13.1
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	81
Toluene-D8	105
Bromofluorobenzene	100

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4769
P.O. No.: 10003-41
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample No.: 88-4769

Sample ID: METHOD BLANK

Analyte	Result (ug/kg)
Acetone	30
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/kg

ND = Nondetectable

ESAL Job No. : 88-4769
Date Received: 12/05/88
Date Analyzed: 12-14-88

ESAL No. : MB1214R2   Sample Desc. : Water, Method Blank

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	2.6
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	81
Toluene-D8	105
Bromofluorobenzene	100

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4769
P.O. No.: 10003-41
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample No.: 88-4769

Sample ID: METHOD BLANK

Analyte	Result (ug/L)
Acetone	31.1
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No. : 88-4769
Date Received: 12-05-88
Date Analyzed: 12-15-88

Sample Description 476910MS   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1,1-Dichloroethylene	69	61-145
Trichloroethylene	99	71-120
Chlorobenzene	107	75-130
Toluene	115	76-125
Benzene	108	76-127

Method : Volatile Organic Analysis, EPA Method 624 (GC/MS)

Recovery limits are EPA CLP guidelines

ESAL Job No. : 88-4769
Date Received: 12-05-88
Date Analyzed: 12-14-88

Sample Description 476902   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1,1-Dichloroethylene	72	59-172
Trichloroethylene	103	62-137
Chlorobenzene	102	60-133
Toluene	111	59-139
Benzene	109	66-142

Method Volatile Organic Analysis, EPA Method 8240 (GC/MS)

Recovery limits are EPA CLP guidelines

esa Laboratories, Inc.

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KLEO TALIADOUROS	ESAL Job No.: 88-4744
HALEY & ALDRICH, INC.	P.O. Number: 10003-41
58 CHARLES STREET	Date Received: 12/01/88
CAMBRIDGE, MA 02142	Date Reported: 12/22/88

SUBJECT: 10003-41, Parcel 18; Petroleum hydrocarbon,
Petroeum identification, Pesticides, PCB's

Your samples which you submitted for analysis on 12/01/88 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Richard R. Keenan

Richard R. Keenan,Ph.D.,CIH
Laboratory Director

Encl.

ESA LABORATORIES, INC.

PETROLEUM IDENTIFICATION

Kleo Taliadouros
Haley & Aldrich, Inc.

ESAL Job No.:89-4744
P.O. No.10003-41
Date Received:12/01/88
Date Analyzed:12/09/89

SMP NO.	DESCRIPTION	PETRO. HC (MG/L)	PET. ID
01	TP1-S1	200	HEAVIER THAN DIESEL FUEL LIGHTER THAN MOTOR OIL
02	TP2-S1	90	MOTOR OIL
03	TP3-S2	46	MOTOR OIL
04	TP4-S1	81	MOTOR OIL
05	TP5-S1	121	WEATHERED MOTOR OIL
06	TP7-S1	316	GASOLINE,DIESEL OR FUEL #2
07	TP8-S1	45	MOTOR OIL
08	TP9-S1	1366	HEAVIER THAN DIESEL FUEL LIGHTER THAN MOTOR OIL
09	TP10-S1	50	MOTOR OIL
10	TP101-S1	1600	MOTOR OIL
11	TP701-S1	164	GASOILINE AND MOTOR OIL
12	TP11-S1	55	MOTOR OIL
13	TP12-S1	60	GASOLINE AND MOTOR OIL
14	TP15-S1	2128	MOTOR OIL & GEAR OIL
15	TP21-S2	55	MOTOR OIL

Sample Prep. EPA Method 9071

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4744
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/09/88

Sample Description: 88-4744-01

Sample ID: 10003-41, TP1, S-1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	60	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	20	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	30	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4744
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/09/88

Sample Description: 88-4744-02

Sample ID: 10003-41, TP2, S-1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	11	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4744
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/09/88

Sample Description: 88-4744-03

Sample ID: 10003-41, TP3, S-2

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4744
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/09/88

Sample Description: 88-4744-04

Sample ID: 10003-41, TP4, S-1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	10	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	25	10
Endosulfan I	110	10
Dieldrin	40	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4744
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/09/88

Sample Description: 88-4744-06

Sample ID: 10003-41, TP7, S-1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	110	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	50	10
Endosulfan I	110	10
Dieldrin	ND	20
4,4'-DDE	40	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4744
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/09/88

Sample Description: 88-4744-07

Sample ID: 10003-41, TP8, S-1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	80	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	2000	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4744
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/09/88

Sample Description: 88-4744-10   Sample ID: 10003-41, TP101, S-1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	104	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	50	10
Heptachlor	ND	10
Aldrin	33	10
Heptachlor Epoxide	60	10
Endosulfan I	140	10
Dieldrin	ND	20
4,4'-DDE	50	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable   LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4744
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/09/88

Sample Description: 88-4744-11

Sample ID: 10003-41, TF701, S-1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	124	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	40	10
Heptachlor	ND	10
Aldrin	60	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4744
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/09/88

Sample Description: 88-4744-12 Sample ID: 10003-41, TP11, S-1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4744
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/09/88

Sample Description: 88-4744-13

Sample ID: 10003-41, TP12, S-1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	200	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	150	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

esa

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PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4744
P.O. Number: 10003-41
Date Received: 12/01/88
Date Analyzed: 12/09/88

Sample Description: 88-4744-14

Sample ID: 10003-41, TP15, S-1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	400	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	180	10
Heptachlor	225	10
Aldrin	50	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable

LOD = Limit of Detection

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TELECOPIER: (617) 275-5529

December 23, 1988
P.O. Number: 10003-41

KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02142

SUBJECT: 10003-41; Parcel 18

All samples submitted for analysis as part of the Parcel 18 project (H&A file no. 10003-41) have been analyzed as requested.

This package contains those analyses which had not been previously submitted to you. The package is complete.

In our review of the data we discovered a typographical error for the Sample Identification for ESAL No. 88-4743-03 (H&A TP3, S-2). This error occurred for the metals results (PP13) which had already been sent to you. Please remove the original sheet from the packet and replace it with this corrected report.

If you have any questions concerning any of these data, please do not hesitate to call.

Richard R. Keenan

Richard R. Keenan, Ph.D., CIH
Laboratory Director

Encl.

ESA LABORATORIES, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4743
P.O. Number: 10003-41
Date Received: 12-01-88
Date Analyzed: 12-15-88

Sample No.: 88-4743-03

Sample ID: Soil, 10003-41; TP3,S-2

Analyte	Result (mg/kg)	LOD (mg/kg)	Method
Antimony	ND	2	204.1
Arsenic	3.7	0.04	226.3
Beryllium	0.5	0.1	210.1
Cadmium	1.0	0.1	213.1
Chromium	17	1.0	218.1
Copper	27	0.4	220.1
Lead	9.8	1	239.1
Mercury	ND	0.04	245.1
Nickel	20	0.8	249.1
Selenium	ND	0.04	270.3
Silver	0.6	0.2	272.1
Thallium	8.6	2	279.1
Zinc	51	0.1	289.1

Sample Prep.: EPA 3050

ND = Nondetectable

LOD = Limit of Detection

esa Laboratories, Inc.

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KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02142

ESAL Job No.: 88-4746
P.O. Number: 10003-41
Date Received: 12/01/88
Date Reported: 12/23/88

SUBJECT: 10003-41, Parcel 18; Total Cyanide

Your samples which you submitted for cyanide analysis on 12/01/88 have been processed. The analyses were performed by RAI. Their report is enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Richard R. Keenan

Richard R. Keenan, Ph.D., CIH
Laboratory Director

Encl.

RAI

Resource Analysts, Inc.
Subsidiary of MILLIPORE
P.O. Box 778, One Lafayette Road
Hampton, N.H. 03842
(603) 926-7777

To:

Mr. Reginald Griffin
ESA Laboratories, Inc.
43 Wiggins Ave
Bedford, MA 01730

P.O. Number: L881206

Date Received: 12/06/88 (1230)

Lab Number: 15,537

Date Reported: 12/21/88

Haley & Aldrich Project No.: 10003-41; Parcel 18

Parameter: Total Cyanide (ug/g) **Matrix:** Solid
Date Analyzed: 12/13/88
Method/Reference: 335.2/40 CFR Part 136, Friday, October 26, 1984

Field Identification		Laboratory Number	Concentration
884746-01	TP3, S-2	15,537-1	<0.7
884746-02	TP4, S-1	15,537-2	<0.6
884746-03	TP7, S-1	15,537-3	<0.7
884746-04	TP701, S-1	15,537-4	<0.7
884746-05	TP15, S-1	15,537-5	<0.7
884746-06	TP21, S-2	15,537-6	<0.4

Results expressed on a dry weight basis.

Technical Director

12/21/88
Date

esa Laboratories, Inc.

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KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02142

ESAL Job No.: 88-4772
P.O. Number: 10003-41
Date Received: 12/02/88
Date Reported: 12/20/88

SUBJECT: 10003-41, Parcel 18; Petroleum hydrocarbons, Petroleum identification, Pesticides, PCB's

Your samples which you submitted for analysis on 12/02/88 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Richard R. Keenan

Richard R. Keenan, Ph.D., CIH
Laboratory Director

Encl.

AN ESA COMPANY

ESA LABORATORIES, INC.

PETROLEUM IDENTIFICATION

Kleo Taliadouros
Haley & Aldrich, Inc.

ESAL Job No.:89-4772
P.O. No.10003-41
Date Received:12/02/88
Date Analyzed:12/17/89

SMP NO.	DESCRIPTION	PETRO. HC (MG/L)	PET. ID
01	TP6-S1	3	KEROSENE & MOTOR OIL
02	TP18-S1	56	KEROSENE & MOTOR OIL
03	TP19-S1	1460	KEROSENE
04	TP20-S1	45	MOTOR OIL
05	TP18-S3	700	MODERATELY WEATHERED GEAR OIL
06	TP13-S1	157	MOTOR OIL
07	TP14A-S1	144	MOTOR OIL
08	TP16-S1	142	KEROSENE & MOTOR OIL AND GEAR OIL
09	TP17-S1	483	MOTOR OIL
10	TP16-S2	940	GASOLINE, GEAR OIL AND MOTOR OIL

Sample Prep. EPA Method 9071

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4772
P.O. Number: 10003-41
Date Received: 12/02/88
Date Analyzed: 12/17/88

Sample Description: 88-4772-01 Sample ID: 10003-41, TP6-S1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4772
P.O. Number: 10003-41
Date Received: 12/02/88
Date Analyzed: 12/17/88

Sample Description: 88-4772-02 Sample ID: 10003-41, TP18-S1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	24	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4772
P.O. Number: 10003-41
Date Received: 12/02/88
Date Analyzed: 12/17/88

Sample Description: 88-4772-04 Sample ID: 10003-41, TP20-S1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4772
P.O. Number: 10003-41
Date Received: 12/02/88
Date Analyzed: 12/17/88

Sample Description: 88-4772-05 Sample ID: 10003-41, TP18-S3

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	10	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	12	10
Endosulfan I	50	10
Dieldrin	ND	20
4,4'-DDE	19	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4772
P.O. Number: 10003-41
Date Received: 12/02/88
Date Analyzed: 12/17/88

Sample Description: 88-4772-08 Sample ID: 10003-41, TP16-S1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 88-4772
P.O. Number: 10003-41
Date Received: 12/02/88
Date Analyzed: 12/17/88

Sample Description: 88-4772-09 Sample ID: 10003-41, TP17-S1

Analyte	RESULT (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
delta-BHC	ND	10
gamma-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Epoxide	85	10
Endosulfan I	50	10
Dieldrin	ND	20
4,4'-DDE	50	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

esa Laboratories, Inc.

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KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02142

ESAL Job No.:	88-4770
P.O. Number:	10003-41
Date Received:	12/01/88
Date Reported:	12/23/88

SUBJECT: 10003-41, Parcel 18: Acid/base-neutral extractables, Total Cyanide

Your samples which you submitted for cyanide and ABN analysis on 12/01/88 have been processed. These analyses were performed by RAI. The results of these analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Richard R. Keenan

Richard R. Keenan, Ph.D., CIH
Laboratory Director

Encl.

RAI

Resource Analysts, Inc
Subsidiary of MILLIPORE
P.O. Box 778, One Lafayette Road
Hampton, N.H. 03842
(603) 926-7777

To:

Mr. Reginald Griffin
ESA Laboratories, Inc.
43 Wiggins Avenue
Bedford, MA 01730

P.O. Number: L881206
Date Received: 12/06/88 (1230)
Lab Number: 15,536 (C)
Date Reported: 12/19/88

Attached please find test results for acid/base/neutral extractable organic compounds.

Field Identification: 884770-02
Matrix: Solid
Laboratory Number: 15.536-8
Haley & Aldrich Project No.: 10003-41; Parcel 18
(Sample No. TP18-S1)

Parameter		Concentration	Date Analyzed	Method/Ref.
Total Cyanide (ug/g)	TP18-S1	<1.25	12/09/88	335.2/2

Above results expressed on a dry weight basis.

Reference: 2) 40 CFR Part 136, Friday, October 26, 1984

Technical Director

12/19/88
Date

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

-

Laboratory Number: 15.536-7
Sample Designation: 884770-01
Date Extracted: 12/09/88
Date Analyzed: 12/13/88
Matrix: Solid

Haley & Aldrich Project No.: 10003-41,
Parcel 18

Sample ID: TP6-S1

Results expressed on a dry (103 degrees C) basis.
Moisture content: 12%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
N-NITROSODIMETHYLAMINE	BDL	0.3
PHENOL	BDL	0.3
Bis (2-CHLOROETHYL) ETHER	BDL	0.3
2-CHLOROPHENOL	BDL	0.3
1,3-DICHLOROBENZENE	BDL	0.3
1,4-DICHLOROBENZENE	BDL	0.3
BENZYL ALCOHOL	BDL	0.3
1,2-DICHLOROBENZENE	BDL	0.3
2-METHYLPHENOL	BDL	0.3
Bis (2-CHLOROISOPROPYL) ETHER	BDL	0.3
4-METHYLPHENOL	BDL	0.3
HEXACHLOROETHANE	BDL	0.3
N-NITROSODI-N-PROPYLAMINE	BDL	0.3
NITROBENZENE	BDL	0.3
ISOPHORONE	BDL	0.3
2-NITROPHENOL	BDL	0.3
2,4-DIMETHYLPHENOL	BDL	0.3
BENZOIC ACID	BDL	1
Bis (2-CHLORETHOXY) METHANE	BDL	0.3
2,4-DICHLOROPHENOL	BDL	0.3
1,2,4-TRICHLOROBENZENE	BDL	0.3
NAPHTHALENE	0.43	0.3
4-CHLOROANILINE	BDL	0.3
HEXACHLOROBUTADIENE	BDL	0.3
4-CHLORO-3-METHYLPHENOL	BDL	0.3
2-METHYLNAPHTHALENE	1.1	0.3
HEXACHLOROCYCLOPENTADIENE	BDL	0.3
2,4,6-TRICHLOROPHENOL	BDL	0.3
2,4,5-TRICHLOROPHENOL	BDL	1
2-CHLORONAPHTHALENE	BDL	0.3
2-NITROANILINE	BDL	1
DIMETHYLPHTHALATE	BDL	0.3
ACENAPHTHYLENE	BDL	0.3
2,6-DINITROTOLUENE	BDL	0.3
3-NITROANILINE	BDL	1
ACENAPHTHENE	BDL	0.3
2,4-DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION (ug/g
4-NITROPHENOL	BDL	1
DIBENZOFURAN	BDL	0.3
2,4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	BDL	0.3
4-NITROANILINE	BDL	1
4,6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	Trace	0.3
ANTHRACENE	BDL	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	BDL	0.3
BENZIDENE	BDL	2
PYRENE	Trace	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3,3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	BDL	0.3
CHRYSENE	Trace	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	BDL	0.3
BENZO(k)FLUORANTHENE	BDL	0.3
BENZO(a)PYRENE	BDL	0.3
IDENO(1,2,3-c,d)PYRENE	BDL	0.3
DIBENZO(a,h)ANTHRACENE	BDL	0.3
BENZO(g,h,i)PERYLENE	BDL	0.3

'Trace' denotes probable presence below listed detection lim

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: EPA SW 846, 2ND EDITION
METHOD 3550/8270

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

aboratory Number:	15.536-8
ample Designation:	884770-02
ate Extracted:	12/09/88
ate Analyzed:	12/14/88
atrix:	Solid

Haley & Aldrich Project No.: 10003-41,
Parcel 18

Sample ID: TP18-S1

esults expressed on a dry (103 degrees C) basis.

oisture content: 12%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
-NITROSODIMETHYLAMINE	BDL	0.3
HENOL	BDL	0.3
is (2-CHLOROETHYL) ETHER	BDL	0.3
-CHLOROPHENOL	BDL	0.3
.3-DICHLOROBENZENE	BDL	0.3
.4-DICHLOROBENZENE	BDL	0.3
ENZYL ALCOHOL	BDL	0.3
.2-DICHLOROBENZENE	BDL	0.3
-METHYLPHENOL	BDL	0.3
is (2-CHLOROISOPROPYL) ETHER	BDL	0.3
-METHYLPHENOL	BDL	0.3
EXACHLOROETHANE	BDL	0.3
-NITROSODI-N-PROPYLAMINE	BDL	0.3
ITROBENZENE	BDL	0.3
SOPHORONE	BDL	0.3
-NITROPHENOL	BDL	0.3
.4-DIMETHYLPHENOL	BDL	0.3
ENZOIC ACID	BDL	1
is (2-CHLORETHOXY) METHANE	BDL	0.3
.4-DICHLOROPHENOL	BDL	0.3
.2.4-TRICHLOROBENZENE	BDL	0.3
APHTHALENE	BDL	0.3
-CHLOROANILINE	BDL	0.3
EXACHLOROBUTADIENE	BDL	0.3
-CHLORO-3-METHYLPHENOL	BDL	0.3
-METHYLNAPHTHALENE	BDL	0.3
EXACHLOROCYCLOPENTADIENE	BDL	0.3
.4.6-TRICHLOROPHENOL	BDL	0.3
.4.5-TRICHLOROPHENOL	BDL	1
-CHLORONAPHTHALENE	BDL	0.3
-NITROANILINE	BDL	1
IMETHYLPHTHALATE	BDL	0.3
CENAPHTHYLENE	BDL	0.3
.6-DINITROTOLUENE	BDL	0.3
-NITROANILINE	BDL	1
CENAPHTHENE	0.52	0.3
.4-DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
4-NITROPHENOL	BDL	1
DIBENZOFURAN	Trace	0.3
2.4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	0.56	0.3
4-NITROANILINE	BDL	1
4.6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	5	0.3
ANTHRACENE	0.97	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	6.3	0.3
BENZIDENE	BDL	2
PYRENE	2.7	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3.3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	1.7	0.3
CHRYSENE	3.7	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	3	0.3
BENZO(k)FLUORANTHENE	3	0.3
BENZO(a)PYRENE	2.3	0.3
IDENO(1.2.3-c.d)PYRENE	0.93	0.3
DIBENZO(a.h)ANTHRACENE	0.58	0.3
BENZO(g.h.i)PERYLENE	1.1	0.3

'Trace' denotes probable presence below listed detection limit.

BDL = BELOW DETECTION LIMIT

METHOD REFERENCE: EPA SW 846. 2ND EDITION
METHOD 3550/8270

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Laboratory Number: 15,536-9
Sample Designation: 334770-03
Date Extracted: -987
Date Analyzed: 12/13/88
Matrix: Solid

Haley & Aldrich Project No.: 10003-41,
Parcel 18

Sample ID: TP16-S1

Results expressed on a dry (103 degrees C) basis.
Moisture content: 40%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
N-NITROSODIMETHYLAMINE	BDL	0.3
PHENOL	BDL	0.3
Bis (2-CHLOROETHYL) ETHER	BDL	0.3
2-CHLOROPHENOL	BDL	0.3
1,3-DICHLOROBENZENE	BDL	0.3
1,4-DICHLOROBENZENE	BDL	0.3
BENZYL ALCOHOL	BDL	0.3
1,2-DICHLOROBENZENE	BDL	0.3
2-METHYLPHENOL	BDL	0.3
Bis (2-CHLOROISOPROPYL) ETHER	BDL	0.3
4-METHYLPHENOL	BDL	0.3
HEXACHLOROETHANE	BDL	0.3
N-NITROSODI-N-PROPYLAMINE	BDL	0.3
NITROBENZENE	BDL	0.3
ISOPHORONE	BDL	0.3
2-NITROPHENOL	BDL	0.3
2,4-DIMETHYLPHENOL	BDL	0.3
BENZOIC ACID	BDL	1
Bis (2-CHLORETHOXY) METHANE	BDL	0.3
2,4-DICHLOROPHENOL	BDL	0.3
1,2,4-TRICHLOROBENZENE	BDL	0.3
NAPHTHALENE	BDL	0.3
4-CHLOROANILINE	BDL	0.3
HEXACHLOROBUTADIENE	BDL	0.3
4-CHLORO-3-METHYLPHENOL	BDL	0.3
2-METHYLNAPHTHALENE	BDL	0.3
HEXACHLOROCYCLOPENTADIENE	BDL	0.3
2,4,6-TRICHLOROPHENOL	BDL	0.3
2,4,5-TRICHLOROPHENOL	BDL	1
2-CHLORONAPHTHALENE	BDL	0.3
2-NITROANILINE	BDL	1
DIMETHYLPHTHALATE	BDL	0.3
ACENAPHTHYLENE	BDL	0.3
2,6-DINITROTOLUENE	BDL	0.3
3-NITROANILINE	BDL	1
ACENAPHTHENE	BDL	0.3
2,4-DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION (ug/g)
4-NITROPHENOL	BDL	1
DIBENZOFURAN	BDL	0.3
2,4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	BDL	0.3
4-NITROANILINE	BDL	1
4,6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	Trace	0.3
ANTHRACENE	BDL	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	Trace	0.3
BENZIDENE	BDL	2
PYRENE	Trace	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3,3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	BDL	0.3
CHRYSENE	Trace	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	BDL	0.3
BENZO(k)FLUORANTHENE	BDL	0.3
BENZO(a)PYRENE	BDL	0.3
IDENO(1,2,3-c,d)PYRENE	BDL	0.3
DIBENZO(a,h)ANTHRACENE	BDL	0.3
BENZO(g,h,i)PERYLENE	BDL	0.3

Trace denotes probable presence below listed detection limit.

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: EPA SW 846, 2ND EDITION
METHOD 3550/3270

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Laboratory Number:	15.536-2	Haley & Aldrich Project No.: 10003-41, Parcel 18
Sample Designation:	384745-01	
Date Extracted:	12/09/88	Sample ID: TP1, S1
Date Analyzed:	12/12/88	
Matrix:	Solid	

Results expressed on a dry (103 degrees C) basis.
Moisture content: 8%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
N-NITROSODIMETHYLAMINE	BDL	0.3
PHENOL	BDL	0.3
Bis (2-CHLOROETHYL) ETHER	BDL	0.3
2-CHLOROPHENOL	BDL	0.3
1.3-DICHLOROBENZENE	BDL	0.3
1.4-DICHLOROBENZENE	BDL	0.3
BENZYL ALCOHOL	BDL	0.3
1.2-DICHLOROBENZENE	BDL	0.3
2-METHYLPHENOL	BDL	0.3
Bis (2-CHLOROISOPROPYL) ETHER	BDL	0.3
4-METHYLPHENOL	BDL	0.3
HEXACHLOROETHANE	BDL	0.3
N-NITROSODI-N-PROPYLAMINE	BDL	0.3
NITROBENZENE	BDL	0.3
ISOPHORONE	BDL	0.3
2-NITROPHENOL	BDL	0.3
2.4-DIMETHYLPHENOL	BDL	0.3
BENZOIC ACID	BDL	1
Bis (2-CHLORETHOXY) METHANE	BDL	0.3
2.4-DICHLOROPHENOL	BDL	0.3
1.2.4-TRICHLOROBENZENE	BDL	0.3
NAPHTHALENE	BDL	0.3
4-CHLOROANILINE	BDL	0.3
HEXACHLOROBUTADIENE	BDL	0.3
4-CHLORO-3-METHYLPHENOL	BDL	0.3
2-METHYLNAPHTHALENE	BDL	0.3
HEXACHLOROCYCLOPENTADIENE	BDL	0.3
2.4.6-TRICHLOROPHENOL	BDL	0.3
2.4.5-TRICHLOROPHENOL	BDL	1
2-CHLORONAPHTHALENE	BDL	0.3
2-NITROANILINE	BDL	1
DIMETHYLPHTHALATE	BDL	0.3
ACENAPHTHYLENE	BDL	0.3
2.6-DINITROTOLUENE	BDL	0.3
3-NITROANILINE	BDL	1
CENAPHTHENE	0.65	0.3
4-DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION LIMI (ug/g)
4-NITROPHENOL	BDL	1
DIBENZOFURAN	BDL	0.3
2.4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	0.86	0.3
4-NITROANILINE	BDL	1
4.6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	1.8	0.3
ANTHRACENE	BDL	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	0.72	0.3
BENZIDENE	BDL	2
PYRENE	Trace	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3.3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	Trace	0.3
CHRYSENE	0.44	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	Trace	0.3
BENZO(k)FLUORANTHENE	Trace	0.3
BENZO(a)PYRENE	0.48	0.3
IDENO(1.2.3-c.d)PYRENE	BDL	0.3
DIBENZO(a.h)ANTHRACENE	BDL	0.3
BENZO(g.h.i)PERYLENE	BDL	0.3

'Trace' denotes probable presence below listed detection limit.

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: EPA SW 846. 2ND EDITION
METHOD 3550/8270

Resource Analysts, Inc., Subsidiary of MILLIPORE

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Laboratory Number: 15.536-3
Sample Designation: 334745-02
Date Extracted: 12/05/88
Date Analyzed: 12/12/88
Matrix: Solid

Haley & Aldrich Project No.: 10003-41,
Parcel 18

Sample ID: TP3, S-2

Results expressed on a dry (103 degrees C) basis.
Moisture content: 7%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
N-NITROSODIMETHYLAMINE	BDL	0.3
PHENOL	BDL	0.3
Bis (2-CHLOROETHYL) ETHER	BDL	0.3
2-CHLOROPHENOL	BDL	0.3
1.3-DICHLOROBENZENE	BDL	0.3
1.4-DICHLOROBENZENE	BDL	0.3
BENZYL ALCOHOL	BDL	0.3
1.2-DICHLOROBENZENE	BDL	0.3
2-METHYLPHENOL	BDL	0.3
Bis (2-CHLOROISOPROPYL) ETHER	BDL	0.3
4-METHYLPHENOL	BDL	0.3
HEXACHLOROETHANE	BDL	0.3
N-NITROSODI-N-PROPYLAMINE	BDL	0.3
NITROBENZENE	BDL	0.3
ISOPHORONE	BDL	0.3
2-NITROPHENOL	BDL	0.3
2.4-DIMETHYLPHENOL	BDL	0.3
BENZOIC ACID	BDL	1
Bis (2-CHLORETHOXY) METHANE	BDL	0.3
2.4-DICHLOROPHENOL	BDL	0.3
1.2.4-TRICHLOROBENZENE	BDL	0.3
NAPHTHALENE	BDL	0.3
4-CHLOROANILINE	BDL	0.3
HEXACHLOROBUTADIENE	BDL	0.3
4-CHLORO-3-METHYLPHENOL	BDL	0.3
2-METHYLNAPHTHALENE	BDL	0.3
HEXACHLOROCYCLOPENTADIENE	BDL	0.3
2.4.6-TRICHLOROPHENOL	BDL	0.3
2.4.5-TRICHLOROPHENOL	BDL	1
2-CHLORONAPHTHALENE	BDL	0.3
2-NITROANILINE	BDL	1
DIMETHYLPHTHALATE	BDL	0.3
ACENAPHTHYLENE	BDL	0.3
2.6-DINITROTOLUENE	BDL	0.3
3-NITROANILINE	BDL	1
ACENAPHTHENE	BDL	0.3
2.4-DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION L (ug/g)
4-NITROPHENOL	BDL	1
DIBENZOFURAN	BDL	0.3
2.4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	BDL	0.3
4-NITROANILINE	BDL	1
4.6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	BDL	0.3
ANTHRACENE	BDL	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	BDL	0.3
BENZIDENE	BDL	2
PYRENE	BDL	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3.3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	BDL	0.3
CHRYSENE	BDL	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	BDL	0.3
BENZO(k)FLUORANTHENE	BDL	0.3
BENZO(a)PYRENE	BDL	0.3
IDENO(1.2.3-c.d)PYRENE	BDL	0.3
DIBENZO(a.h)ANTHRACENE	BDL	0.3
BENZO(g.h.i)PERYLENE	BDL	0.3

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: EPA SW 846. 2ND EDITION
METHOD 3550/3270

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

aboratory Number: 15.536-4
ample Designation: 334745-03
ate Extracted: 12/08/88
ate Analyzed: 12/13/88
atrix: Solid

Haley & Aldrich Project No.: 10003-41,
Parcel 18

Sample ID: TP4, S-1

esults expressed on a dry (103 degrees C) basis.
oisture content: 16%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
NITROSODIMETHYLAMINE	BDL	0.3
ENOL	BDL	0.3
s (2-CHLOROETHYL) ETHER	BDL	0.3
CHLOROPHENOL	BDL	0.3
3-DICHLOROBENZENE	BDL	0.3
4-DICHLOROBENZENE	BDL	0.3
NZYL ALCOHOL	BDL	0.3
2-DICHLOROBENZENE	BDL	0.3
METHYLPHENOL	BDL	0.3
s (2-CHLOROISOPROPYL) ETHER	BDL	0.3
METHYLPHENOL	BDL	0.3
XACHLOROETHANE	BDL	0.3
NITROSODI-N-PROPYLAMINE	BDL	0.3
TROBENZENE	BDL	0.3
OPHORONE	BDL	0.3
NITROPHENOL	BDL	0.3
-DIMETHYLPHENOL	BDL	0.3
NZOIC ACID	BDL	1
s (2-CHLORETHOXY) METHANE	BDL	0.3
-DICHLOROPHENOL	BDL	0.3
.4-TRICHLOROBENZENE	BDL	0.3
HTHALENE	BDL	0.3
HLOROANILINE	BDL	0.3
ACHLOROBUTADIENE	BDL	0.3
HLORO-3-METHYLPHENOL	BDL	0.3
ETHYLNAPHTHALENE	BDL	0.3
ACHLOROCYCLOPENTADIENE	BDL	0.3
.6-TRICHLOROPHENOL	BDL	0.3
.5-TRICHLOROPHENOL	BDL	1
HLORONAPHTHALENE	BDL	0.3
ITROANILINE	BDL	1
ETHYLPHTHALATE	BDL	0.3
NAPHTHYLENE	BDL	0.3
-DINITROTOLUENE	BDL	0.3
ITROANILINE	BDL	1
NAPHTHENE	BDL	0.3
-DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
4-NITROPHENOL	BDL	1
DIBENZOFURAN	BDL	0.3
2.4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	BDL	0.3
4-NITROANILINE	BDL	1
4.6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	BDL	0.3
ANTHRACENE	BDL	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	BDL	0.3
BENZIDENE	BDL	2
PYRENE	BDL	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3.3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	BDL	0.3
CHRYSENE	BDL	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	BDL	0.3
BENZO(k)FLUORANTHENE	BDL	0.3
BENZO(a)PYRENE	BDL	0.3
IDENO(1.2.3-c.d)PYRENE	BDL	0.3
DIBENZO(a.h)ANTHRACENE	BDL	0.3
BENZO(g.h.i)PERYLENE	BDL	0.3

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: EPA SW 846. 2ND EDITION
METHOD 3550/8270

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Laboratory Number: 15.536-5
Sample Designation: 334745-04
Date Extracted: 12/08/88
Date Analyzed: 12/13/88
Matrix: Solid

Haley & Aldrich Project No.: 10003-41,
Parcel 18

Sample ID: TP7, S-1

Results expressed on a dry (103 degrees C) basis.
Moisture content: 11%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
N-NITROSODIMETHYLAMINE	BDL	0.3
PHENOL	BDL	0.3
Bis (2-CHLOROETHYL) ETHER	BDL	0.3
2-CHLOROPHENOL	BDL	0.3
1.3-DICHLOROBENZENE	BDL	0.3
1.4-DICHLOROBENZENE	BDL	0.3
BENZYL ALCOHOL	BDL	0.3
1.2-DICHLOROBENZENE	BDL	0.3
2-METHYLPHENOL	BDL	0.3
Bis (2-CHLOROISOPROPYL) ETHER	BDL	0.3
4-METHYLPHENOL	BDL	0.3
HEXACHLOROETHANE	BDL	0.3
N-NITROSODI-N-PROPYLAMINE	BDL	0.3
NITROBENZENE	BDL	0.3
ISOPHORONE	BDL	0.3
2-NITROPHENOL	BDL	0.3
2.4-DIMETHYLPHENOL	BDL	0.3
BENZOIC ACID	BDL	1
Bis (2-CHLORETHOXY) METHANE	BDL	0.3
2.4-DICHLOROPHENOL	BDL	0.3
1.2.4-TRICHLOROBENZENE	BDL	0.3
NAPHTHALENE	2.6	0.3
4-CHLOROANILINE	BDL	0.3
HEXACHLOROBUTADIENE	BDL	0.3
4-CHLORO-3-METHYLPHENOL	BDL	0.3
2-METHYLNAPHTHALENE	5.7	0.3
HEXACHLOROCYCLOPENTADIENE	BDL	0.3
2.4.6-TRICHLOROPHENOL	BDL	0.3
2.4.5-TRICHLOROPHENOL	BDL	1
2-CHLORONAPHTHALENE	BDL	0.3
2-NITROANILINE	BDL	1
DIMETHYLPHTHALATE	BDL	0.3
ACENAPHTHYLENE	BDL	0.3
2.6-DINITROTOLUENE	BDL	0.3
3-NITROANILINE	BDL	1
ACENAPHTHENE	Trace	0.3
2.4-DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION L (ug/g)
4-NITROPHENOL	BDL	1
DIBENZOFURAN	BDL	0.3
2.4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	0.42	0.3
4-NITROANILINE	BDL	1
4.6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	0.89	0.3
ANTHRACENE	BDL	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	Trace	0.3
BENZIDENE	BDL	2
PYRENE	Trace	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3.3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	BDL	0.3
CHRYSENE	Trace	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	BDL	0.3
BENZO(k)FLUORANTHENE	BDL	0.3
BENZO(a)PYRENE	BDL	0.3
IDENO(1.2.3-c.d)PYRENE	BDL	0.3
DIBENZO(a.h)ANTHRACENE	BDL	0.3
BENZO(g.h.i)PERYLENE	BDL	0.3

'Trace' denotes probable presence below listed detection limit.

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: EPA SW 846. 2ND EDITION
METHOD 3550/3270

Resource Analysts, Inc., Subsidiary of MILLIPORE

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

ratory Number:	15.536-6
le Designation:	884745-05
Extracted:	12/08/88
Analyzed:	12/13/88
ix:	Solid

Haley & Aldrich Project No.: 10003-41,
Parcel 18

Sample ID: TP701, S-1

lts expressed on a dry (103 degrees C) basis.

ture content: 10%

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
TROSODIMETHYLAMINE	BDL	0.3
OL	BDL	0.3
(2-CHLOROETHYL) ETHER	BDL	0.3
LOROPHENOL	BDL	0.3
DICHLOROBENZENE	BDL	0.3
DICHLOROBENZENE	BDL	0.3
YL ALCOHOL	BDL	0.3
DICHLOROBENZENE	BDL	0.3
THYLPHENOL	BDL	0.3
(2-CHLOROISOPROPYL) ETHER	BDL	0.3
THYLPHENOL	BDL	0.3
CHLOROETHANE	BDL	0.3
TROSODI-N-PROPYLAMINE	BDL	0.3
OBENZENE	BDL	0.3
HORONE	BDL	0.3
TROPHENOL	BDL	0.3
DIMETHYLPHENOL	BDL	0.3
IC ACID	BDL	1
(2-CHLORETHOXY) METHANE	BDL	0.3
DICHLOROPHENOL	BDL	0.3
4-TRICHLOROBENZENE	BDL	0.3
THALENE	3.7	0.3
LOROANILINE	BDL	0.3
CHLOROBUTADIENE	BDL	0.3
LORO-3-METHYLPHENOL	BDL	0.3
THYLNAPHTHALENE	8.2	0.3
CHLOROCYCLOPENTADIENE	BDL	0.3
6-TRICHLOROPHENOL	BDL	0.3
5-TRICHLOROPHENOL	BDL	1
LORONAPHTHALENE	BDL	0.3
TROANILINE	BDL	1
THYLPHTHALATE	BDL	0.3
APHTHYLENE	BDL	0.3
DINITROTOLUENE	BDL	0.3
TROANILINE	BDL	1
APHTHENE	BDL	0.3
DINITROPHENOL	BDL	1

	CONCENTRATION (ug/g)	DETECTION LIMIT (ug/g)
4-NITROPHENOL	BDL	1
DIBENZOFURAN	BDL	0.3
2.4-DINITROTOLUENE	BDL	0.3
DIETHYLPHTHALATE	BDL	0.3
4-CHLOROPHENYL-PHENYLETHER	BDL	0.3
FLUORENE	0.58	0.3
4-NITROANILINE	BDL	1
4.6-DINITRO-2-METHYLPHENOL	BDL	1
N-NITROSODIPHENYLAMINE (1)	BDL	0.3
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	0.3
4-BROMOPHENYL-PHENYLETHER	BDL	0.3
HEXACHLOROBENZENE	BDL	0.3
PENTACHLOROPHENOL	BDL	1
PHENANTHRENE	0.9	0.3
ANTHRACENE	BDL	0.3
DI-N-BUTYLPHTHALATE	BDL	0.3
FLUOROANTHENE	Trace	0.3
BENZIDENE	BDL	2
PYRENE	Trace	0.3
BUTYLBENZYLPHTHALATE	BDL	0.3
3.3'-DICHLOROBENZIDINE	BDL	0.7
BENZO(a)ANTHRACENE	BDL	0.3
CHRYSENE	Trace	0.3
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	0.3
DI-N-OCTYLPHTHALATE	BDL	0.3
BENZO(b)FLUORANTHENE	BDL	0.3
BENZO(k)FLUORANTHENE	BDL	0.3
BENZO(a)PYRENE	BDL	0.3
IDENO(1.2.3-c.d)PYRENE	BDL	0.3
DIBENZO(a.h)ANTHRACENE	BDL	0.3
BENZO(g.h.i)PERYLENE	BDL	0.3

'Trace' denotes probable presence below listed detection limit.

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: EPA SW 846. 2ND EDITION
METHOD 3550/8270

HALEY & ALDRICH INC.
58 Charles Street, Cambridge, Mass
Tel 617/494-1606

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

H&A FILE NO. 1 2 0 0 3 41
PROJECT Duscci 18
H&A CONTACT [illegible]

LABORATORY ESA
ADDRESS Wiggins Rd Bedford MA
CONTACT ~~Rosemary~~ Paul Ulucki

DELIVERY DATE 5 May 1989
DATE FINAL REPORT DUE
PROJECT MANAGER'S INITIALS Todd Coffin

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	Cyanide				NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
SI		4 May '89	1003	0-45ft	soil/fill		X	X	X			X				2	
SII		"	1103	"	"		X	X	X							2	
SIV		"	1155	"	"		X	X	X							2	
SV		"	1330	"	"		X	X	X			X				2	
SIII		"	1425	"	"		X	X	X							2	
SVIII		"	1530	"	"		X	X	X							2	
SVI		5 May 89	0830	"	"		X	X	X							2	
SIX		"	0930	"	"		X	X	X							2	
SVII		"	1023	"	"		X	X	X			X				2	
SXI		"	1125	"	"		X	X	X			X				2	
SX		"	1335	"	"		X	X	X							2	

LIQUID	VOA Vial											
	Glass Bottle											
	PlasticBottle											
	Preservative											
	Container Volume											
SOLID	VOA Vial											
	Glass Jar		X	X	X			X				
	Plastic Jar											
	Preservative		A	A	A			A				
	Container Volume		8oz	4oz	4oz			8oz				

REMARKS: (Sample storage, nonstandard sample bottles)

I. Sampled and Relinquished by
Sign Susan D. Matlocki
Print Susan D. Matlocki
Firm Haley & Aldrich, INC
Date 5 May 1989 Time 1455

I. Received by
Sign Rosemary Payne
Print Rosemary PAYNE
Firm ESA Labs
Date 5/5/89 Time 1456

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☐ No ☐ Yes

If Yes, explain in remarks.

Note: Sample bottles supplied by lab, unless indicated.

PRESERVATION KEY: A - Sample chilled.
B - Filtered, C - Acidified with
D - NaOH, E - NaThiosulfate F - Other

esa

ESA Laboratories, Inc.
43 Wiggins Avenue
Bedford, MA 01730
Phone: (617) 275-0100

KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02141

ESAL Job No.: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Reported: 05/25/89

SUBJECT: PARCEL 18

Your samples which you submitted for analysis on 05/05/89 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Paul A. Ullucci

Paul A. Ullucci
Technical Director

Encl.

ESA LABORATORIES, INC.
43 WIGGINS AVENUE BEDFORD,MA 01730 USA
617-275-0100 . TELEFAX #:617-275-5529

LABORATORY ANALYSIS
DATA FORM

CLIENT: HALEY & ALDRICH,INC.
CLIENT#: 51319
BATCH: 891629
P.O.#: 10003-41

KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02141

DATE REC'D:05/05/89
DATE REPORTED: 05/25/89
REPORT STATUS: FINAL

	TEST DESCRIPTION	METHOD
(ABN-625S):	ACID & BASE-NEUTRALS EXTRACT.-SOIL	EPA 8270
(CYANIDE):	CYANIDE - SOIL	EPA 9010

SMP NO.	DESCRIPTION	ABN-625S (N/A)	CYANIDE (MG/KG)
01	SI	*	<1
02	SII	*	----
03	SIV	*	----
04	SV	*	<1
05	SIII	*	----
06	SVIII	*	----
07	SVI	*	----
08	SIX	*	----
09	SVII	*	<1
10	SXI	*	<1
11	SX	*	----

REFERENCE VALUES:
ABN-625S
CYANIDE

Paul A. Ullucci
Laboratory Director

ESA Laboratories, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/12/89

Sample No: 89-1629-01 Sample ID: 10003-41, SI

Analyte	Result (mg\KG)	LOD (mg\KG)	Method
Antimony	ND	5	7040
Arsenic	4.8	0.1	7061
Beryllium	0.55	0.25	7090
Cadmium	0.3	0.25	7130
Chromium	23	2.5	7190
Copper	60	1	7210
Lead	75	2.5	7420
Mercury	0.47	0.1	7471
Nickel	12	2	7520
Selenium	0.15	0.1	7741
Silver	ND	0.5	7760
Thallium	9.0	5.0	7840
Zinc	71	0.25	7950

ND = Nondetectable LOD = Limit of detection

ESA Laboratories, INC.

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KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/12/89

Sample No: 89-1629-02

Sample ID: 10003-41, SII

Analyte	Result (mg\KG)	LOD (mg\KG)	Method
Antimony	ND	5	7040
Arsenic	4.9	0.1	7061
Beryllium	0.65	0.25	7090
Cadmium	ND	0.25	7130
Chromium	35	2.5	7190
Copper	23	1	7210
Lead	56	2.5	7420
Mercury	0.38	0.1	7471
Nickel	16	2	7520
Selenium	0.15	0.1	7741
Silver	ND	0.5	7760
Thallium	7.5	5.0	7840
Zinc	61	0.25	7950

ND = Nondetectable   LOD = Limit of detection

ESA Laboratories, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/12/89

Sample No: 89-1629-03

Sample ID: 10003-41, SIV

Analyte	Result (mg\KG)	LOD (mg\KG)	Method
Antimony	ND	5	7040
Arsenic	6.9	0.1	7061
Beryllium	0.6	0.25	7090
Cadmium	ND	0.25	7130
Chromium	26	2.5	7190
Copper	27	1	7210
Lead	94	2.5	7420
Mercury	0.41	0.1	7471
Nickel	15	2	7520
Selenium	0.18	0.1	7741
Silver	ND	0.5	7760
Thallium	10	5.0	7840
Zinc	80	0.25	7950

ND = Nondetectable   LOD = Limit of detection

ESA Laboratories, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/12/89

Sample No: 89-1629-04

Sample ID: 10003-41, SV

Analyte	Result (mg\KG)	LOD (mg\KG)	Method
Antimony	ND	5	7040
Arsenic	9.4	0.1	7061
Beryllium	0.9	0.25	7090
Cadmium	ND	0.25	7130
Chromium	24	2.5	7190
Copper	25	1	7210
Lead	115	2.5	7420
Mercury	1.3	0.1	7471
Nickel	13	2	7520
Selenium	0.2	0.1	7741
Silver	ND	0.5	7760
Thallium	11	5.0	7840
Zinc	118	0.25	7950

ND = Nondetectable   LOD = Limit of detection

ESA Laboratories, INC.

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KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/12/89

Sample No: 89-1629-05 Sample ID: 10003-41, SIII

Analyte	Result (mg\KG)	LOD (mg\KG)	Method
Antimony	ND	5	7040
Arsenic	4.8	0.1	7061
Beryllium	0.7	0.25	7090
Cadmium	ND	0.25	7130
Chromium	26	2.5	7190
Copper	23	1	7210
Lead	57	2.5	7420
Mercury	3.4	0.1	7471
Nickel	12	2	7520
Selenium	0.28	0.1	7741
Silver	ND	0.5	7760
Thallium	11	5.0	7840
Zinc	67	0.25	7950

ND = Nondetectable LOD = Limit of detection

ESA Laboratories, INC.

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KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/12/89

Sample No: 89-1629-06

Sample ID: 10003-41, SVIII

Analyte	Result (mg\KG)	LOD (mg\KG)	Method
Antimony	ND	5	7040
Arsenic	6.2	0.1	7061
Beryllium	0.6	0.25	7090
Cadmium	ND	0.25	7130
Chromium	28	2.5	7190
Copper	18	1	7210
Lead	63	2.5	7420
Mercury	0.2	0.1	7471
Nickel	11	2	7520
Selenium	0.15	0.1	7741
Silver	ND	0.5	7760
Thallium	7.5	5.0	7840
Zinc	53	0.25	7950

ND = Nondetectable   LOD = Limit of detection

ESA Laboratories, INC.

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KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/12/89

Sample No: 89-1629-07

Sample ID: 10003-41, SVI

Analyte	Result (mg\KG)	LOD (mg\KG)	Method
Antimony	ND	5	7040
Arsenic	5.1	0.1	7061
Beryllium	0.5	0.25	7090
Cadmium	ND	0.25	7130
Chromium	21	2.5	7190
Copper	14	1	7210
Lead	53	2.5	7420
Mercury	0.2	0.1	7471
Nickel	9	2	7520
Selenium	ND	0.1	7741
Silver	ND	0.5	7760
Thallium	9	5.0	7840
Zinc	67	0.25	7950

ND = Nondetectable   LOD = Limit of detection

ESA Laboratories, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/12/89

Sample No: 89-1629-08

Sample ID: 10003-41, SIX

Analyte	Result (mg\KG)	LOD (mg\KG)	Method
Antimony	ND	5	7040
Arsenic	7.5	0.1	7061
Beryllium	0.7	0.25	7090
Cadmium	ND	0.25	7130
Chromium	28	2.5	7190
Copper	20	1	7210
Lead	108	2.5	7420
Mercury	0.44	0.1	7471
Nickel	16	2	7520
Selenium	0.085	0.1	7741
Silver	ND	0.5	7760
Thallium	10	5.0	7840
Zinc	88	0.25	7950

ND = Nondetectable LOD = Limit of detection

ESA Laboratories, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/12/89

Sample No: 89-1629-09

Sample ID: 10003-41, SVII

Analyte	Result (mg\KG)	LOD (mg\KG)	Method
Antimony	ND	5	7040
Arsenic	5.9	0.1	7061
Beryllium	0.7	0.25	7090
Cadmium	ND	0.25	7130
Chromium	20	2.5	7190
Copper	23	1	7210
Lead	71	2.5	7420
Mercury	0.39	0.1	7471
Nickel	13	2	7520
Selenium	0.31	0.1	7741
Silver	ND	0.5	7760
Thallium	7.5	5.0	7840
Zinc	72	0.25	7950

ND = Nondetectable   LOD = Limit of detection

ESA Laboratories, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/12/89

Sample No: 89-1629-10

Sample ID: 10003-41, SXI

Analyte	Result (mg\KG)	LOD (mg\KG)	Method
Antimony	ND	5	7040
Arsenic	16	0.1	7061
Beryllium	0.65	0.25	7090
Cadmium	ND	0.25	7130
Chromium	21	2.5	7190
Copper	40	1	7210
Lead	141	2.5	7420
Mercury	0.43	0.1	7471
Nickel	13	2	7520
Selenium	ND	0.1	7741
Silver	ND	0.5	7760
Thallium	9.5	5.0	7840
Zinc	110	0.25	7950

ND = Nondetectable   LOD = Limit of detection

ESA Laboratories, INC.

PP13

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/12/89

Sample No: 89-1629-11

Sample ID: 10003-41, SX

Analyte	Result (mg\KG)	LOD (mg\KG)	Method
Antimony	ND	5	7040
Arsenic	8.3	0.1	7061
Beryllium	0.55	0.25	7090
Cadmium	ND	0.25	7130
Chromium	17	2.5	7190
Copper	27	1	7210
Lead	103	2.5	7420
Mercury	0.65	0.1	7471
Nickel	10	2	7520
Selenium	0.41	0.1	7741
Silver	ND	0.5	7760
Thallium	9.0	5.0	7840
Zinc	66	0.25	7950

ND = Nondetectable   LOD = Limit of detection

ESA Laboratories, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/17/89

Sample No: 89-1629-01 Sample ID: 10003-41,SI

Analyte	Result (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
gamma-BHC	ND	10
delta-BHC	ND	10
Heptachlor	ND	10
Aldrin	130	10
Heptachlor Expoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	302	200

METHOD: EPA method 8080
ND = Nondetectable LOD = Limit of detection

ESA Laboratories, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/17/89

Sample No: 89-1629-02 Sample ID: 1003-41, SII

Analyte	Result (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
gamma-BHC	ND	10
delta-BHC	ND	10
Heptachlor	ND	10
Aldrin	69	10
Heptachlor Expoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

METHOD: EPA method 8080
ND = Nondetectable LOD = Limit of detection

ESA Laboratories, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/17/89

Sample No: 89-1629-03

Sample ID: 10003-41, SIV

Analyte	Result (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
gamma-BHC	ND	10
delta-BHC	ND	10
Heptachlor	ND	10
Aldrin	91	10
Heptachlor Expoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	154	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

METHOD: EPA method 8080
ND = Nondetectable   LOD = Limit of detection

ESA Laboratories, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/17/89

Sample No: 89-1629-04

Sample ID: 10003-41, SV,

Analyte	Result (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
gamma-BHC	ND	10
delta-BHC	ND	10
Heptachlor	ND	10
Aldrin	51	10
Heptachlor Expoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

METHOD: EPA method 8080
ND = Nondetectable   LOD = Limit of detection

ESA Laboratories, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/17/89

Sample No: 89-1629-05

Sample ID: 10003-41, SIII

Analyte	Result (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
gamma-BHC	ND	10
delta-BHC	ND	10
Heptachlor	ND	10
Aldrin	72	10
Heptachlor Expoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

METHOD: EPA method 8080
ND = Nondetectable LOD = Limit of detection

ESA Laboratories, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/17/89

Sample No: 89-1629-06

Sample ID: 10003-41, SVIII

Analyte	Result (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
gamma-BHC	ND	10
delta-BHC	ND	10
Heptachlor	ND	10
Aldrin	ND	10
Heptachlor Expoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	67	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

METHOD: EPA method 8080
ND = Nondetectable   LOD = Limit of detection

ESA Laboratories, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/17/89

Sample No: 89-1629-07 Sample ID: 10003-41, SVI

Analyte	Result (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
gamma-BHC	ND	10
delta-BHC	ND	10
Heptachlor	ND	10
Aldrin	62	10
Heptachlor Expoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

METHOD: EPA method 8080
ND = Nondetectable LOD = Limit of detection

ESA Laboratories, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/17/89

Sample No: 89-1629-08 Sample ID: 10003-41, SIX

Analyte	Result (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
gamma-BHC	ND	10
delta-BHC	ND	10
Heptachlor	ND	10
Aldrin	91	10
Heptachlor Expoxide	ND	10
Endosulfan I	72	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

METHOD: EPA method 8080
ND = Nondetectable LOD = Limit of detection

ESA Laboratories, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/17/89

Sample No: 89-1629-09 Sample ID: 10003-41, SVII

Analyte	Result (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
gamma-BHC	ND	10
delta-BHC	ND	10
Heptachlor	ND	10
Aldrin	288	10
Heptachlor Expoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

METHOD: EPA method 8080
ND = Nondetectable LOD = Limit of detection

ESA Laboratories, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/17/89

Sample No: 89-1629-10 Sample ID: 10003-41, SXI

Analyte	Result (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
gamma-BHC	ND	10
delta-BHC	ND	10
Heptachlor	ND	10
Aldrin	187	10
Heptachlor Expoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	ND	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	241	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

METHOD: EPA method 8080
ND = Nondetectable LOD = Limit of detection

ESA Laboratories, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No: 891629
P.O. Number: 10003-41
Date Received: 05/05/89
Date Analyzed: 05/17/89

Sample No: 89-1629-11

Sample ID: 10003-41, SX

Analyte	Result (ug/kg)	LOD (ug/kg)
alpha-BHC	ND	10
beta-BHC	ND	10
gamma-BHC	ND	10
delta-BHC	ND	10
Heptachlor	ND	10
Aldrin	124	10
Heptachlor Expoxide	ND	10
Endosulfan I	ND	10
Dieldrin	ND	20
4,4'-DDE	76	20
Endrin	ND	20
Endosulfan II	ND	20
4,4'-DDD	ND	20
Endosulfan Sulfate	ND	20
4,4'-DDT	ND	20
Endrin Ketone	ND	20
Methoxychlor	ND	100
Chlordane	ND	100
Toxaphene	ND	200
AROCLOR-1016	ND	100
AROCLOR-1221	ND	100
AROCLOR-1232	ND	100
AROCLOR-1242	ND	100
AROCLOR-1248	ND	100
AROCLOR-1254	ND	200
AROCLOR-1260	ND	200

METHOD: EPA method 8080
ND = Nondetectable   LOD = Limit of detection

Appendix H

APPENDIX H

Laboratory Data - Groundwater Samples

HALEY & ALDRICH, INC.
58 Charles Street, Cambridge, Mass.
Tel. 617/494-1606

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

H&A FILE NO. 1 0 0 0 3 - 4 1
PROJECT PARCEL 18 /GW Sampling
H&A CONTACT Kleo Taliadouros

LABORATORY ESA
ADDRESS 43 Wiggins Ave BEDFORD, MA
CONTACT Paul Tellucci

DELIVERY DATE 7 FEB 89
DATE FINAL REPORT DUE NORMAL
PROJECT MANAGER'S INITIALS TODD COFFIN

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	ANALYSES: VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	TPH by IR ✓	CYANIDE			NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
B4-OW		7 FEB 89	1330	–	GW	X			X							3	
B16-OW		7 FEB 89	1348	–	GW	X	X	X	X	X		X	X			7	
B15-OW		7 FEB 89	1414	–	GW	X			X	X		~~X~~	ntc			4	
B3B-OW		7 FEB 89	1439	–	GW	X				X		~~X~~				3	

		VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	TPH by IR	CYANIDE		
LIQUID	VOA Vial	X									
	Glass Bottle		X		X			X			
	Plastic Bottle			X					X		
	Preservative	A	A	A/C	A			A/C	A/D		
	Container Volume	40 ml	1 l	.5 l	1 l			1 l	.5 l		
SOLID	VOA Vial										
	Glass Jar										
	Plastic Jar										
	Preservative										
	Container Volume										

Note: Sample bottles supplied by lab, unless indicated.

REMARKS: (Sample storage, nonstandard sample bottles)

I. Sampled and Relinquished by
Sign
Print David M. Bois
Firm H&A
Date 7 FEB 89 Time 1540

I. Received by
Sign Rosemary Payne
Print ROSEMARY PAYNE
Firm ESA LABS
Date 2/7/89 Time 3:40 pm

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☐ No ☐ Yes
If Yes, explain in remarks.

PRESERVATION KEY: A - Sample chilled, B - Filtered, C - Acidified with HNO3 (metals); HCl (TPH), D - NaOH, E - NaThiosulfate, F - Other

esa Laboratories, Inc.

RECEIVED

MAR - 7 1989

HALEY & ALDRICH, INC.

43 WIGGINS AVENUE
BEDFORD, MA. 01730
617-275-0100 • TELEX. 923344
TELECOPIER: (617) 275-5529

[illegible]
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02141

[illegible]
DATE REC'D: [illegible]
DATE REPORTED: [illegible]

SUBJECT: PARCEL [illegible] SAMPLING

Your samples which you submitted for analysis on 02/[illegible]/89 have been processed. The results of the analyses are included.

If you have any questions concerning any of these data, please do not hesitate to call.

Paul A. Gilman

[illegible]
Laboratory Director

ESAL Job No.: 89-0482
Date Received: 02/07/89
Date Analyzed: 2-8-89

ESAL No.: 89-0482-01 Sample Desc: WATER, 12003-4' B4-GW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	95
Toluene-D8	100
Bromofluorobenzene	92

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND - Nondetectable Limit of detection: <2 ug/L

[illegible]

[illegible]

[illegible]
Haley & Aldrich, Inc.

ESA Lot No. [illegible]
P.O. No.:10003-41
Date Received:02/[illegible]
Date Analyzed:02/[illegible]

Sample [illegible] 189-044[illegible]

Sample ID:10003-41-B4-GW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No. : 89-0482
Date Received: 02/07/89
Date Analyzed: 2-8-89

ESAL No. : 89-0482-02 Sample Desc:WATER, 10003-41, B10-GW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	112
Toluene-D8	106
Bromofluorobenzene	91

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

[illegible]

[illegible]

[illegible]
[illegible]

Batch I.D. No: [illegible]
P.O. No.: [illegible]
Date Received: [illegible]
Date Analyzed: [illegible]

Sample No.: [illegible]

Sample ID:10003-41-B16-GW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/L

ESAL Job No. : 89-0492
Date Received: 02/07/89
Date Analyzed: 2-8-89

ESAL No. : 89-0492-02   Sample Desc: WATER 10003-41 215-GW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	121
Toluene-D8	94
Bromofluorobenzene	89

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/L

[illegible]

[illegible]

[illegible]
HALEY & [illegible]

[illegible]
[illegible]
Date Received: [illegible]
Date Analyzed: [illegible]

Sample No. [illegible] Sample ID: 10003-41-B15-OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/L

ESAL Job No. : 89-0482
Date Received: 02 07 89
Date Analyzed: 2-8-89

ESAL No. : 89-0482-04   Sample Id: WATER 10000-4' [illegible]

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	520
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	109
Toluene-D8	90
Bromofluorobenzene	84

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/L

[illegible]

[illegible]

[illegible]
[illegible], INC.

ESAL [illegible]
P.O. No.: [illegible]
Date Received [illegible]
Date Analyzed [illegible]

Sample No.: 89-04[illegible]4

Sample ID:10003-4[illegible]-B[illegible]-GW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	500

Method: Volatile Organic Analysis EPA Method 624 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/L

ESA LABORATORIES, INC.

PESTICIDES AND [illegible]

[illegible]
HALEY & ALDRICH, INC.

ESAL Job No.:8904[illegible]
P.O. Number:10003-4[illegible]
Date Received:02/0[illegible]
Date Analyzed:02/0[illegible]

Sample Description:[illegible]-0432-[illegible]   Sample ID:10003-41-B4-OW

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	0.80	0.05
beta-BHC	0.37	0.05
delta-BHC	ND	0.05
gamma-BHC	ND	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	ND	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	0.12	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 8080

ND = Nondetectable   LOD = Limit of Detection

ESA [illegible]

[illegible]

[illegible]
[illegible]

Sample [illegible]
[illegible]
Date Received: [illegible]
Date Analyzed: [illegible]

Sample Description: [illegible]-0462-02 Sample ID: [illegible]

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	0.64	0.05
beta-BHC	0.53	0.05
delta-BHC	ND	0.05
gamma-BHC	0.12	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	ND	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	ND	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB's

[illegible]
HALEY & ALDRICH, INC.

ESA Job No.: [illegible]
P.O. Number: 10003-41
Date Received: [illegible]
Date Analyzed: [illegible]

Sample Description: 89-[illegible] Sample ID: 10003-41-B15-[illegible]

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	0.98	0.05
beta-BHC	0.30	0.05
delta-BHC	ND	0.05
gamma-BHC	ND	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	ND	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	ND	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

[illegible]

[illegible]

Date Received: [illegible]
Date Analyzed: [illegible]

Sample No.: [illegible]

Sample ID: [illegible]

Analyte	Result (mg/L)	LOD (mg/L)	Method
Antimony	ND	0.1	204.[illegible]
Arsenic	ND	0.002	226.2
Beryllium	ND	0.005	210.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.005	218.1
Copper	ND	0.02	220.1
Lead	ND	0.05	239.2
Mercury	ND	0.0002	245.1
Nickel	0.16	0.04	249.1
Selenium	ND	0.002	270.2
Silver	ND	0.01	272.1
Thallium	ND	0.1	279.1
Zinc	0.11	0.005	289.1

Sample Prep.: EPA 3010

ND = Nondetectable   LOD = Limit of Detection

ESAL Job No. : 89-0482
Date Received: 2-7-89
Date Analyzed: 2-8-89

Sample Description 039903MS   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1,1-Dichloroethylene	95	61-145
Trichloroethylene	72	71-120
Chlorobenzene	111	75-130
Toluene	97	76-125
Benzene	122	76-127

Method : Volatile Organic Analysis, EPA Method 624 (GC/MS)

Recovery limits are EPA CLP guidelines

ESAL Job No. : 89-0482
Date Received: 02/07/89
Date Analyzed: 2-8-89

ESAL No. : VB208B1 Sample Desc. : Water Method Blank

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	90
Toluene-D8	102
Bromofluorobenzene	100

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

REED [illegible]
HALEY & ALDRICH, INC.

ESA Job No.:B[illegible]
P.O. No.:10003-41
Date Received:02/[illegible] 89
Date Analyzed:02/2[illegible] 89

Sample No.:MB2[illegible]

Sample ID:10003-41-METHOD BLANK

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	5.6
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/L

ESA LAB [illegible]

PETROLEUM [illegible]

[illegible]
[illegible] INC.

ESA Lab No.: [illegible]
P.O. No. [illegible]
Date Received: [illegible]
Date Analyzed: [illegible]

SMP NO.	DESCRIPTION	PETRO. HC (MG/L)	PET. ID
02	816-OW	4	NO IDENTIFIABLE PATTERN
03	815-OW	5	NO IDENTIFIABLE PATTERN
04	838-OW	6	MOSTLY GASOLINE TRACE MOTOR OIL

Sample Prep. EPA Method 9070

ESA LABORATORIES, INC.

TOTAL PETROLEUM HYDROCARBONS

NAME: ALTADJUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 89048
P.O. Number: 10901-41
Date Received: 12/07/87
Date Analyzed: 12/17/87

	TEST DESCRIPTION	METHOD
(O&G):	OIL & GREASE - IR	EPA 413.2
(TPH):	PETROLEUM HC - IR	EPA 418.1

SMP NO.	DESCRIPTION	O&G (MG/L)	TPH (MG/L)
02	B16-OW	7	2

Sample Prep. EPA Method 9070

RAI

Resource Analysts, Inc.
Subsidiary of MILLIPORE
P.O. Box 778, One Lafayette Road
Hampton, N.H. 03842
(603) 926-7777

To:

Ms. Carol Brown
ESA Laboratories
43 Wiggins Avenue
Bedford, MA 01730

P.O. Number: L890213

Date Received: 02/08/89 (1500)

Lab Number: 16,203

Date Reported: 02/22/89

Attached please find test results for acid/base/neutral extractable organic compounds.

Field Identification: 0482-02A Haley & Aldrich B16-OW **Matrix:** Water
Laboratory Number: 16,203-1

Parameter	Concentration	Date Analyzed	Method/Ref.
Total Cyanide (mg/L)	<0.01	02/14/89	335.2/1

Reference: 1) 40 CFR Part 136, Friday, October 26, 1984

Technical Director

2/22/89
Date

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Haley & Aldrich Project No. 10003-41
Sample No. B16-OW

Laboratory Number:	16,203-2
Sample Designation:	0432-02B
Date Extracted:	02/13/89
Date Analyzed:	02/15/89
Matrix:	Water

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)		CONCENTRATION (ug/L)	DETECTION LIMI (ug/L
N-NITROSODIMETHYLAMINE	BDL	25	4-NITROPHENOL	BDL	50
PHENOL	BDL	10	DIBENZOFURAN	BDL	10
Bis (2-CHLOROETHYL) ETHER	BDL	10	2,4-DINITROTOLUENE	BDL	25
2-CHLOROPHENOL	BDL	10	DIETHYLPHTHALATE	BDL	10
1,3-DICHLOROBENZENE	BDL	10	4-CHLOROPHENYL-PHENYLETHER	BDL	10
1,4-DICHLOROBENZENE	BDL	10	FLUORENE	BDL	10
BENZYL ALCOHOL	BDL	10	4-NITROANILINE	BDL	50
1,2-DICHLOROBENZENE	BDL	10	4,6-DINITRO-2-METHYLPHENOL	BDL	50
2-METHYLPHENOL	BDL	10	N-NITROSODIPHENYLAMINE (1)	BDL	10
Bis (2-CHLOROISOPROPYL) ETHER	BDL	10	1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	10
4-METHYLPHENOL	BDL	10	4-BROMOPHENYL-PHENYLETHER	BDL	10
HEXACHLOROETHANE	BDL	25	HEXACHLOROBENZENE	BDL	10
N-NITROSODI-N-PROPYLAMINE	BDL	10	PENTACHLOROPHENOL	BDL	10
NITROBENZENE	BDL	10	PHENANTHRENE	BDL	10
ISOPHORONE	BDL	10	ANTHRACENE	BDL	10
2-NITROPHENOL	BDL	10	DI-N-BUTYLPHTHALATE	BDL	10
2,4-DIMETHYLPHENOL	BDL	10	FLUOROANTHENE	BDL	10
BENZOIC ACID	BDL	50	BENZIDENE	BDL	100
Bis (2-CHLORETHOXY) METHANE	BDL	10	PYRENE	BDL	10
2,4-DICHLOROPHENOL	BDL	10	BUTYLBENZYLPHTHALATE	BDL	10
1,2,4-TRICHLOROBENZENE	BDL	10	3,3-DICHLOROBENZIDINE	BDL	20
NAPHTHALENE	BDL	10	BENZO(a)ANTHRACENE	BDL	10
4-CHLOROANILINE	BDL	10	CHRYSENE	BDL	10
HEXACHLOROBUTADIENE	BDL	10	Bis(2-ETHYLHEXYL)PHTHALATE	BDL	10
4-CHLORO-3-METHYLPHENOL	BDL	10	DI-N-OCTYLPHTHALATE	BDL	10
2-METHYLNAPHTHALENE	BDL	10	BENZO(b)FLUORANTHENE	BDL	10
HEXACHLOROCYCLOPENTADIENE	BDL	10	BENZO(k)FLUORANTHENE	BDL	10
2,4,6-TRICHLOROPHENOL	BDL	10	BENZO(a)PYRENE	BDL	10
2,4,5-TRICHLOROPHENOL	BDL	50	IDENO(1,2,3-c,d)PYRENE	BDL	10
2-CHLORONAPHTHALENE	BDL	10	DIBENZO(a,h)ANTHRACENE	BDL	10
2-NITROANILINE	BDL	50	BENZO(g,h,i)PERYLENE	BDL	10
DIMETHYLPHTHALATE	BDL	10			
ACENAPHTHYLENE	BDL	10			
2,6-DINITROTOLUENE	BDL	25			
3-NITROANILINE	BDL	50			
ACENAPHTHENE	BDL	10			
2,4-DINITROPHENOL	BDL	50			

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER
METHOD 625

HALEY & ALDRICH, INC.
58 Charles Street, Cambridge, Mass.
Tel. 617/494-1606

CHAIN OF CUSTODY RECORD

PAGE 1 OF ~~3~~ DMB 1

H&A FILE NO. 1 0 0 0 3 - 4 1
PROJECT PARCEL 18
H&A CONTACT KLEO TALIADOUROS

LABORATORY ESA
ADDRESS 43 WIGGINS AVE BEDFORD MA
CONTACT Paul Villucci

DELIVERY DATE 8 FEB 89
DATE FINAL REPORT DUE normal turn
PROJECT MANAGER'S INITIALS Todd Coffin

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	TPH by IR	CYANIDE			NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
B7-OW		8 FEB 89	935	–	GW	X			X							3	
B19-OW			942	–		X	X	X	X	X		X	X			7	Please filter metals
B13-OW			1115	–		X	X	X	X	X		X	X			7	samples
B5-OW			1110	–		X			X							3	
B10-OW			1308	–		X			X							3	
B8-OW			1334	–		X			X	X		X	Pdm			4	
B9-OW			1330	–		X				X		X				3	
DMB ~~[illegible]~~																	Did not Sample
B2-OW			1425	–		X			X							3	
DMB ~~[illegible]~~																	Did not Sample
DMB ~~[illegible]~~				–													Did not Sample

I. Sampled and Relinquished by
Sign
Print Doug M. Pois
Firm H&A
Date 8 FEB 89 Time 1600

I. Received by
Sign Carol Brown
Print CAROL Brown
Firm ESA Labs
Date 2/8/89 Time 4:00

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☐ No ☐ Yes

If Yes, explain in remarks.

		VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	TPH by IR	CYANIDE		
LIQUID	VOA Vial	✓									
	Glass Bottle		✓		✓		~~✓~~	✓			
	Plastic Bottle			✓					✓		
	Preservative	A	A	A	A			A/C	A/D		
	Container Volume	40 ml	1.0 l	.5 l	1.0 l			1.0 l	0.5 l		
SOLID	VOA Vial										
	Glass Jar										
	Plastic Jar										
	Preservative										
	Container Volume										

Note: Sample bottles supplied by lab, unless indicated.

PRESERVATION KEY: A - Sample chilled, B - Filtered, C - Acidified with AC, D - NaOH, E - NaThiosulfate, F - Other

REMARKS: (Sample storage, nonstandard sample bottles)

B19-OW and
B13-OW both
ID + TPH
B8-OW and B9-OW
ID only
Paul Villucci
Phone call with
Todd Coffin
2-9-89

esa Laboratories, Inc.

43 WIGGINS AVENUE
BEDFORD, MA. 01730
617-275-0100 • TELEX: 923344
TELECOPIER: (617) 275-5529

KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02141

ESAL Job No.: [illegible]9049A
P.O. Number: 10007-4.
Date Received: 02/08/89
Date Reported: 02/17/89

SUBJECT: GROUND WATER 10007-41 PROJECT: PARCEL 18

Your samples which you submitted for analysis on 02/08/89 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Paul A. Ullucci

Paul A. Ullucci
Technical Director

esa

ESAL Job No. : 89-0496
Date Received: 02/09/89
Date Analyzed: 2-10-89

ESAL No : 89-0496-01 Sample Desc:WATER 10003-41 B7-OW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	103
Toluene-D8	113
Bromofluorobenzene	98

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

TED TALIADOURUS
HALEY & ALDRICH, INC.

ESAL Job No.: 890496
P.O. No.:10003-41
Date Received:02/08/89
Date Analyzed:02/17/89

Sample No.: 89-0496-01

Sample ID:10003-41,B7-OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

RECEIVED
MAR 2 1989
HALEY & ALDRICH, INC.

ESAL Job No. : 89-0496
Date Received: 02/09/89
Date Analyzed: 2-10-89

ESAL No. : 89-0496-02   Sample Desc:WATER 10003-41, B19-OW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	3.4
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	95
Toluene-D8	110
Bromofluorobenzene	99

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 89047
P.O. No.:10003-41
Date Received:02/08/89
Date Analyzed:02/17/89

Sample No.: 89-0496-02

Sample ID:10003-41,B19-OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

esa

ESAL Job No. : 89-0496
Date Received: 02/09/89
Date Analyzed: 2-10-89

ESAL No. : 89-0496-03 Sample Desc:WATER 10003-41 B13-OW

Analyte	Result(ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	104
Toluene-D8	107
Bromofluorobenzene	100

Method: Volatile Organic Analysis, EPA method 8240 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

LEO ALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890496
P.O. No.:10003-41
Date Received:02/08/89
Date Analyzed:02/17/89

Sample No.: 89-0496-03

Sample ID:10003-41,B13-OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No. : 89-0496
Date Received: 02/09/89
Date Analyzed: 2-10-89

ESAL No. : 89-0496-04   Sample Desc:WATER 10003-41 B5-OW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	4.6
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	66.4
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	93
Toluene-D8	87
Bromofluorobenzene	132

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

ALEC KALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890496
P.O. No.:10003-41
Date Received:02/08/89
Date Analyzed:02/17/89

Sample No.: 89-0496-04

Sample ID:10003-41,B5-OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	58.9

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No. : 89-0496
Date Received: 02/09/89
Date Analyzed: 2-10-89

ESAL No. : 89-0496-05   Sample Desc:WATER 10003-41   B10-OW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	95
Toluene-D8	95
Bromofluorobenzene	91

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890496
P.O. No.:10003-41
Date Received:02/08/89
Date Analyzed:02/17/89

Sample No.: 89-0496-05

Sample ID:10003-41,B10-OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No. : 89-0496
Date Received: 02/09/89
Date Analyzed: 2-10-89

ESAL No. : 89-0496-06 Sample Desc:WATER 10003-41 B8-OW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	103
Toluene-D8	105
Bromofluorobenzene	95

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 89-496
P.O. No.:10003-41
Date Received:02/08/89
Date Analyzed:02/17/89

Sample No.: 89-0496-06

Sample ID:10003-41,B8-OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

esa

ESAL Job No. : 89-0496
Date Received: 02/09/89
Date Analyzed: 2-10-89

ESAL No. : 89-0496-07   Sample Desc:WATER 10003-41   89-OW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	106
Toluene-D8	92
Bromofluorobenzene	98

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND - Nondetectable   Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

Ed Taliadouros
HALEY & ALDRICH, INC.

ESAL Job No.: 890496
P.O. No.:10003-41
Date Received:02/08/89
Date Analyzed:02/17/89

Sample No.: 89-0496-07

Sample ID:10003-41,B9-OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No. : 89-0496
Date Received: 02/09/89
Date Analyzed: 2-10-89

ESAL No. : 89-0496-08 Sample Desc:WATER, 10003-41 B2-OW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	106
Toluene-D8	106
Bromofluorobenzene	97

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 89-496
P.O. No.:10003-41
Date Received:02/08/89
Date Analyzed:02/17/89

Sample No.: 89-0496-08

Sample ID:10003-41,B2-OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No. : 89-0496
Date Received: 02/09/89
Date Analyzed: 2-10-89

ESAL No. : MB210R1 Sample Desc. : Water Method Blank

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	90
Toluene-D8	102
Bromofluorobenzene	101

Method: Volatile Organic Analysis EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

LEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890496
P.O. No.:10003-41
Date Received:02/08/89
Date Analyzed:02/17/89

Sample No.: 89-0496

Sample ID:METHOD BLANK

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	5.9
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No. : 89-0496
Date Received: 2-8-89
Date Analyzed: 2-10-89

Sample Description 89049602MS   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1,1-Dichloroethylene	129	61-145
Trichloroethylene	93	71-120
Chlorobenzene	101	75-130
Toluene	123	76-125
Benzene	101	76-127

Method : Volatile Organic Analysis, EPA Method 624 (GC/MS)

Recovery limits are EPA CLP guidelines

ESAL Job No. : 89-0496
Date Received: 2-8-89
Date Analyzed: 2-10-89

Sample Description 89049602MSD   Client Description : Matrix Spike Duplicate

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1,1-Dichloroethylene	132	61-145
Trichloroethylene	86	71-120
Chlorobenzene	97	75-130
Toluene	113	76-125
Benzene	100	76-127

Method : Volatile Organic Analysis, EPA Method 624 (GC/MS)

Recovery limits are EPA CLP guidelines

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

ALEC TALIAOULAS
HALEY & ALDRICH, INC.

ESAL Job No.:89-496
P.O. Number:10003-41
Date Received:02/08/89
Date Analyzed:02/16/89

Sample Description:890496-01

Sample ID:WATER1000341-B7-OW

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	1	0.05
beta-BHC	ND	0.05
delta-BHC	ND	0.05
gamma-BHC	2	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	ND	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	ND	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 608

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.:89-496
P.O. Number:10003-41
Date Received:02/08/89
Date Analyzed:02/16/89

Sample Description:890496-02

Sample ID:WATER1000341-B19-OW

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	0.3	0.05
beta-BHC	0.4	0.05
delta-BHC	ND	0.05
gamma-BHC	ND	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	ND	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	ND	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 608

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.:89-496
P.O. Number:10003-4
Date Received:02/08/8
Date Analyzed:02/16/8

Sample Description:890496-03

Sample ID:WATER1000341-B1 - W

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	0.7	0.05
beta-BHC	0.4	0.05
delta-BHC	ND	0.05
gamma-BHC	0.1	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	0.1	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	ND	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	ND	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 608

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES INC.

PESTICIDES AND PCB'S

K.LED TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.:89-496
P.O. Number:10003-41
Date Received:02/08/89
Date Analyzed:02/16/89

Sample Description:890496-04

Sample ID:WATER1000341-B5-GW

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	0.5	0.05
beta-BHC	ND	0.05
delta-BHC	ND	0.05
gamma-BHC	ND	0.05
Heptachlor	0.1	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	ND	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	ND	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 608

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.:89-45
P.O. Number:10003-4
Date Received:02/08/89
Date Analyzed:02/16/8

Sample Description:890496-05

Sample ID:WATER1000341-Bi[illegible] w

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	ND	0.05
beta-BHC	0.4	0.05
delta-BHC	ND	0.05
gamma-BHC	0.2	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	ND	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	ND	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 608

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

KLEO TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.:89-496
P.O. Number:10003-41
Date Received:02/08/89
Date Analyzed:02/16/89

Sample Description:890496-06

Sample ID:WATER1000341-B8-GW

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	ND	0.05
beta-BHC	ND	0.05
delta-BHC	ND	0.05
gamma-BHC	0.1	0.05
Heptachlor	0.3	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	0.7	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	ND	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 608

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

FRED TALIADOUROS
HALEY & ALDRICH, Inc.

ESAL Job No :29047
P.O. Number:10003-41
Date Received:02/09/89
Date Analyzed:02/16/89

Sample Description:890496-08

Sample ID:WATER1000341-B2-GW

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	ND	0.05
beta-BHC	ND	0.05
delta-BHC	ND	0.05
gamma-BHC	0.1	0.05
Heptachlor	0.5	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	1.0	0.10
4,4'-DDD	0.1	0.10
Endosulfan Sulfate	ND	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 608

ND = Nondetectable

LOD = Limit of Detection

ESA LABORATORIES, INC.

PP:3

ELFO KALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890496
P.O. Number:10003-41
Date Received:02/08/89
Date Analyzed:02/17/89

Sample No.: 890496-02

Sample ID:WATER10003-41-B19UW

Analyte	Result (mg/L)	LOD (mg/L)	Method
Antimony	ND	0.1	204.1
Arsenic	ND	0.002	206.3
Beryllium	ND	0.005	210.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.005	218.1
Copper	ND	0.02	220.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Nickel	0.14	0.04	249.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1
Thallium	ND	0.1	279.1
Zinc	ND	0.005	289.1

Sample Prep.: EPA 3010

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

EPA

Fred [illegible]
HALEY & ALDRICH, INC.

ESAL Job No.: 89049
P.O. Number:1-007-4
Date Received:02/08/89
Date Analyzed:02/17/89

Sample No.: 89049b-03

Sample ID:WATER10003-41-B1 GW

Analyte	Result (mg/L)	LOD (mg/L)	Method
Antimony	ND	0.1	204.1
Arsenic	ND	0.002	226.3
Beryllium	ND	0.005	210.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.005	218.1
Copper	ND	0.02	220.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Nickel	0.11	0.04	249.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1
Thallium	ND	0.1	279.1
Zinc	ND	0.005	289.1

Sample Prep.: EPA 3010

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC

PETROLEUM IDENTIFICATION

[illegible] TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 890496
P.O. No.10003-41
Date Received:02/06/89
Date Analyzed:02/13/89

SMP NO.	DESCRIPTION	PETRO. HC (MG/L)	PET. ID
02	B19-OW	<1*	-
03	B13-OW	<1*	-
06	B8 -OW	<1*	-
07	B9 -OW	<1*	-

* NO IDENTIFIABLE PATTERN

Sample Prep. EPA Method 9070

ESA LABORATORIES, INC.

TOTAL PETROLEUM HYDROCARBONS

LEO [illegible]	ESAL Job No.: 8904-6
HALEY & ALDRICH, INC.	P.O. Number:10003-41
	Date Received:02/08/89
	Date Analyzed:02/09/89

	TEST DESCRIPTION	METHOD
(O&G):	OIL & GREASE - IR	EPA 413.2
(TPH):	PETROLEUM HC - IR	EPA 418.1

SMP NO.	DESCRIPTION	O&G (MG/L)	TPH (MG/L)
02	B19-OW	1	1
03	B13-OW	2	2

Sample Prep. EPA Method 9070

RAI

Resource Analysts, Inc.
Subsidiary of MILLIPORE
P.O. Box 778, One Lafayette Road
Hampton, N.H. 03842
(603) 926-7777

To:

Ms. Rosemary Payne
ESA Laboratories
43 Wiggins Ave
Bedford, MA 01730

P.O. Number: L890214

Date Received: 02/10/89 (1600)

Lab Number: 16,233

Date Reported: 02/22/89

Attached please find test results for acid/base/neutral extractable organic compounds.

Parameter: Total Cyanide (mg/L) Matrix: Water
Date Analyzed: 02/14/89
Method/Reference: 335.2/40 CFR Part 136, Friday, October 26, 1984

Field Identification		Laboratory Number	Concentration
0496-02-B19-OW	H&A File 10003-41	16,233-1	<0.01
0496-03-B13-OW	Parcel 18	16,233-3	<0.01

Technical Director

2/22/89
Date

HALEY & ALDRICH, INC.
FILE NO. 10003-41
PARCEL 18 SAMPLE #2
ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Laboratory Number: 16.233-2
Sample Designation: 0496-02-B19-OW
Date Extracted: 02/14/89
Date Analyzed: 02/15/89
Matrix: Water

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
N-NITROSODIMETHYLAMINE	BDL	25
PHENOL	BDL	10
Bis (2-CHLOROETHYL) ETHER	BDL	10
2-CHLOROPHENOL	BDL	10
1,3-DICHLOROBENZENE	BDL	10
1,4-DICHLOROBENZENE	BDL	10
BENZYL ALCOHOL	BDL	10
1,2-DICHLOROBENZENE	BDL	10
2-METHYLPHENOL	BDL	10
Bis (2-CHLOROISOPROPYL) ETHER	BDL	10
4-METHYLPHENOL	BDL	10
HEXACHLOROETHANE	BDL	25
N-NITROSODI-N-PROPYLAMINE	BDL	10
NITROBENZENE	BDL	10
ISOPHORONE	BDL	10
2-NITROPHENOL	BDL	10
2,4-DIMETHYLPHENOL	BDL	10
BENZOIC ACID	BDL	50
Bis (2-CHLORETHOXY) METHANE	BDL	10
2,4-DICHLOROPHENOL	BDL	10
1,2,4-TRICHLOROBENZENE	BDL	10
NAPHTHALENE	BDL	10
4-CHLOROANILINE	BDL	10
HEXACHLOROBUTADIENE	BDL	10
4-CHLORO-3-METHYLPHENOL	BDL	10
2-METHYLNAPHTHALENE	BDL	10
HEXACHLOROCYCLOPENTADIENE	BDL	10
2,4,6-TRICHLOROPHENOL	BDL	10
2,4,5-TRICHLOROPHENOL	BDL	50
2-CHLORONAPHTHALENE	BDL	10
2-NITROANILINE	BDL	50
DIMETHYLPHTHALATE	BDL	10
ACENAPHTHYLENE	BDL	10
2,6-DINITROTOLUENE	BDL	25
3-NITROANILINE	BDL	50
ACENAPHTHENE	BDL	10
2,4-DINITROPHENOL	BDL	50

	CONCENTRATION (ug/L)	DETECTION L (ug/L)
4-NITROPHENOL	BDL	50
DIBENZOFURAN	BDL	10
2,4-DINITROTOLUENE	BDL	25
DIETHYLPHTHALATE	BDL	10
4-CHLOROPHENYL-PHENYLETHER	BDL	10
FLUORENE	BDL	10
4-NITROANILINE	BDL	50
4,6-DINITRO-2-METHYLPHENOL	BDL	50
N-NITROSODIPHENYLAMINE (1)	BDL	10
1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	10
4-BROMOPHENYL-PHENYLETHER	BDL	10
HEXACHLOROBENZENE	BDL	10
PENTACHLOROPHENOL	BDL	10
PHENANTHRENE	BDL	10
ANTHRACENE	BDL	10
DI-N-BUTYLPHTHALATE	BDL	10
FLUOROANTHENE	BDL	10
BENZIDENE	BDL	100
PYRENE	BDL	10
BUTYLBENZYLPHTHALATE	BDL	10
3,3-DICHLOROBENZIDINE	BDL	20
BENZO(a)ANTHRACENE	BDL	10
CHRYSENE	BDL	10
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	10
DI-N-OCTYLPHTHALATE	BDL	10
BENZO(b)FLUORANTHENE	BDL	10
BENZO(k)FLUORANTHENE	BDL	10
BENZO(a)PYRENE	BDL	10
IDENO(1,2,3-c,d)PYRENE	BDL	10
DIBENZO(a,h)ANTHRACENE	BDL	10
BENZO(g,h,i)PERYLENE	BDL	10

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER
METHOD 625

esa Laboratories, Inc.

RECEIVED
MAR - 7 1989
HALEY & ALDRICH, INC.

43 WIGGINS AVENUE
BEDFORD, MA. 01730
617-275-0100 • TELEX: 923344
TELECOPIER: (617) 275-5529

KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02141

ESAL Job No.: 890496
P.O. Number:10003-41
Date Received:02/08/89
Date Reported:02/17/89

SUBJECT:GROUND WATER 10003-41 PROJECT: PARCEL 18

Your samples which you submitted for analysis on 02/08/89 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Paul A Ullucci

Paul A. Ullucci
Technical Director

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

Haley and Aldrich, Inc.
File No: 10003-41
Parcel 18 Sample B13-OW

Laboratory Number:	16258-1
Sample Designation:	0496-03, BB-OW
Date Extracted:	02/15/89
Date Analyzed:	02/23/39
Matrix:	Water

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
N-NITROSODIMETHYLAMINE	BDL	25
PHENOL	BDL	10
Bis (2-CHLOROETHYL) ETHER	BDL	10
2-CHLOROPHENOL	BDL	10
1.3-DICHLOROBENZENE	BDL	10
1.4-DICHLOROBENZENE	BDL	10
BENZYL ALCOHOL	BDL	10
1.2-DICHLOROBENZENE	BDL	10
2-METHYLPHENOL	BDL	10
Bis (2-CHLOROISOPROPYL) ETHER	BDL	10
4-METHYLPHENOL	BDL	10
HEXACHLOROETHANE	BDL	25
N-NITROSODI-N-PROPYLAMINE	BDL	10
NITROBENZENE	BDL	10
ISOPHORONE	BDL	10
2-NITROPHENOL	BDL	10
2.4-DIMETHYLPHENOL	BDL	10
BENZOIC ACID	BDL	50
Bis (2-CHLORETHOXY) METHANE	BDL	10
2.4-DICHLOROPHENOL	BDL	10
1.2.4-TRICHLOROBENZENE	BDL	10
NAPHTHALENE	BDL	10
4-CHLOROANILINE	BDL	10
HEXACHLOROBUTADIENE	BDL	10
4-CHLORO-3-METHYLPHENOL	BDL	10
2-METHYLNAPHTHALENE	BDL	10
HEXACHLOROCYCLOPENTADIENE	BDL	10
2.4.6-TRICHLOROPHENOL	BDL	10
2.4.5-TRICHLOROPHENOL	BDL	50
2-CHLORONAPHTHALENE	BDL	10
2-NITROANILINE	BDL	50
DIMETHYLPHTHALATE	BDL	10
ACENAPHTHYLENE	BDL	10
2.6-DINITROTOLUENE	BDL	25
3-NITROANILINE	BDL	50
ACENAPHTHENE	BDL	10
2.4-DINITROPHENOL	BDL	50

	CONCENTRATION (ug/L)	DETECTION L (ug/L)
4-NITROPHENOL	BDL	50
DIBENZOFURAN	BDL	10
2.4-DINITROTOLUENE	BDL	25
DIETHYLPHTHALATE	BDL	10
4-CHLOROPHENYL-PHENYLETHER	BDL	10
FLUORENE	BDL	10
4-NITROANILINE	BDL	50
4.6-DINITRO-2-METHYLPHENOL	BDL	50
N-NITROSODIPHENYLAMINE (1)	BDL	10
1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	10
4-BROMOPHENYL-PHENYLETHER	BDL	10
HEXACHLOROBENZENE	BDL	10
PENTACHLOROPHENOL	BDL	10
PHENANTHRENE	BDL	10
ANTHRACENE	BDL	10
DI-N-BUTYLPHTHALATE	BDL	10
FLUOROANTHENE	BDL	10
BENZIDENE	BDL	100
PYRENE	BDL	10
BUTYLBENZYLPHTHALATE	BDL	10
3,3-DICHLOROBENZIDINE	BDL	20
BENZO(a)ANTHRACENE	BDL	10
CHRYSENE	BDL	10
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	10
DI-N-OCTYLPHTHALATE	BDL	10
BENZO(b)FLUORANTHENE	BDL	10
BENZO(k)FLUORANTHENE	BDL	10
BENZO(a)PYRENE	BDL	10
IDENO(1,2,3-c,d)PYRENE	BDL	10
DIBENZO(a,h)ANTHRACENE	BDL	10
BENZO(g,h,i)PERYLENE	BDL	10

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER
METHOD 625

Haley & Aldrich, Inc.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

H&A FILE NO. 10003-41
PROJECT GW Sampling PARCEL 18
H&A CONTACT Kleo Taliadouros

LABORATORY ESA
ADDRESS 43 Wiggins Ave Bedford MA
CONTACT Paul Ullucci

DELIVERY DATE 9 FEB 89
DATE FINAL REPORT DUE normal turn
PROJECT MANAGER'S NAME Todd Coffin

H&A SAMPLE NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE TYPE	VOA	ABN	METALS	PEST/PCB	PET. ID [illegible]	O & G	TPH by IR	CYANIDE			NO. OF CONTAINERS	COMMENTS (Special instructions, cautions, etc.)
B1-OW		9 FEB 89	920	-	GW	X	X	X	X	✓		X	X			7	Please filter metals
B6-OW		↓	1000	-	GW	X	X	X	X	✓		X	X			7	samples.
B11-OW			1015	-	GW	X				✓		X				3	
B201-OW			1022	-	GW	X				✓		X				3	DMB
B202-OW		↓	1002	-	GW	X	X	X	X	✓		X	~~X~~ DMB			6 ~~7~~	← note correction: no CN analysis for B202-OW

	VOA	ABN	METALS	PEST/PCB	PET. ID	O & G	TPH by IR	CYANIDE			
VOA Vial	X										LIQUID
Glass Bottle		X		X			X				
Plastic Bottle			X					X			
Preservative	A	A	A	A			~~A~~ C	~~A~~ D			
Container Volume	40 ml	1 l	.5 l	1 l			1 l	.5 l			
VOA Vial											SOLID
Glass Jar											
Plastic Jar											
Preservative											
Container Volume											

Note: Sample bottles supplied by lab, unless indicated.

I. Sampled and Relinquished by
Sign
Print David M. Bois
Firm H&A
Date 9 FEB 89 Time 1120

I. Received by
Sign Joyce Weinfurt
Print Joyce Weinfurt
Firm ESA Labs
Date 2-9-89 Time 11:20

II. Relinquished by
Sign
Print
Firm
Date Time

II. Received by
Sign
Print
Firm
Date Time

III. Relinquished by
Sign
Print
Firm
Date Time

III. Received by
Sign
Print
Firm
Date Time

IV. Relinquished by
Sign
Print
Firm
Date Time

IV. Received by
Sign
Print
Firm
Date Time

Evidence Samples tampered with? ☐ No ☐ Yes
If Yes, explain in remarks.

REMARKS: (Sample storage, nonstandard sample bottles)
PID on all Samples
TPH on B1-OW
and B6-OW only
Change made 2/9/89
via phone by Todd
Coffin
Paul

PRESERVATION KEY: A - Sample chilled, B - Filtered, C - Acidified with HCl, D - NaOH, E - NaThiosulfate, F - Other

esa Laboratories, Inc.

43 WIGGINS AVENUE
BEDFORD, MA 01730
617-275-0100 • TELEX 923344
TELECOPIER: (617) 275-5529

KLEO TALIADOUROS
HALEY & ALDRICH, INC.
58 CHARLES STREET
CAMBRIDGE, MA 02142

ESAL Job No.: 890512
P.O. Number: 10003-41
Date Received: 02/09/89
Date Reported: 02/24/89

SUBJECT: PROJECT - GW SAMPLING - PARCEL 18

Your samples which you submitted for analysis on 02/09/89 have been processed. The results of the analyses are enclosed.

If you have any questions concerning any of these data, please do not hesitate to call.

Sincerely,

Paul A. Ullucci

Paul A. Ullucci
Laboratory Director

Encl.

RECEIVED
MAR 2 1989
HALEY & ALDRICH, INC.

esa

ESAL Job No. : 89-0512
Date Received: 02/09/89
Date Analyzed: 02-13-89

ESAL No. : 89-0512-01   Sample Desc:10003-41 B1-OW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	96
Toluene-D8	106
Bromofluorobenzene	99

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)

ND - Nondetectable   Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 890512
P.O. No.: 10003-41
Date Received: 02/09/89
Date Analyzed: 02/13/89

Sample No.: 890512-01   Sample ID: 10003-41, B1-OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No : 89-0512
Date Received: 02/09/89
Date Analyzed: 02-13-89

ESAL No : 89-0512-02 Sample Desc:10003-41 BG-OW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	10.1
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	96
Toluene-D8	115
Bromofluorobenzene	101

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

KLEO TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 890512
P.O. No.: 10003-41
Date Received: 02/09/89
Date Analyzed: 02/13/89

Sample No.: 890512-02   Sample ID: 10003-41, B6-OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	23.7

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No. : 89-0512
Date Received: 02/09/89
Date Analyzed: 02-13-89

ESAL No. : 89-0512-03   Sample Desc:10003-41 B11-GW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	90.5
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	92.4
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	95
Toluene-D8	107
Bromofluorobenzene	93

Method: Volatile Organic Analysis, EPA method 624 (GC/MS)
ND = Nondetectable   Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

FRED TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 890512
P.O. No.: 10003-41
Date Received: 02/09/89
Date Analyzed: 02/13/89

Sample No.: 890512-[illegible]3

Sample ID: 10003-41, B11-OW

Analyte	Result (ug/L)
Acetone	11.5
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	225

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

[illegible] No. : 89-051[illegible]
Date Received: [illegible]/89
Date Analyzed: [illegible]

[illegible] : 89-051[illegible]-04   Sample Description: [illegible]

Analyte	Result (ug/kg)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	13.7
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery (%)
1,2-Dichloroethane-D4	96
Toluene-D8	109
Bromofluorobenzene	102

Method: Volatile Organic Analysis, EPA Method 8240 (GC/MS)
ND = Nondetectable   Limit of Detection: <2 ug/kg

ESA LABORATORIES, INC.

HSL COMPOUNDS

FRED TALIADOUROS
HALEY & ALDRICH

ESAL Job No.: 890512
P.O. No.: 10003-41
Date Received: 02/09/89
Date Analyzed: 02/13/89

Sample No.: 890512-04

Sample ID: 10003-41, B201-OW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

esa

ESAL Job No. : 89-0512
Date Received: 02/09/89
Date Analyzed: 02-13-89

ESAL No : 89-0512-05 Sample Desc:10003-41 B202-OW

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	9.8
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	96
Toluene-D8	87
Bromofluorobenzene	99

Method: Volatile Organic Analysis EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

ES [illegible]ADOURJS
[illegible] ALDRICH

ESAL Job No.: 89051[illegible]
P.O. No.: 10003-41
Date Received: 02/09/89
Date Analyzed: 02/13/89

Sample No.: 890512-05   Sample ID: 10003-41, B202-GW

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	ND
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	22.1

Method: Volatile Organic Analysis. EPA Method 624 (GC/MS),
Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESAL Job No. : 89-0512
Date Received: 02-09-89
Date Analyzed: 02-13-89

Sample Description 048601MS   Client Description : Matrix Spike

MATRIX SPIKE RECOVERY

Analyte	Recovery (%)	Recovery limits(%)
1,1-Dichloroethylene	85	61-145
Trichloroethylene	109	71-120
Chlorobenzene	106	75-130
Toluene	110	76-125
Benzene	106	76-127

Method : Volatile Organic Analysis, EPA Method 624 (GC/MS)

Recovery limits are EPA CLP guidelines

esa

ESAL Job No. : 89-0512
Date Received: 02/09/89
Date Analyzed: 02-13-89

ESAL No. : MB213B1 Sample Desc. : Water Method Blank

Analyte	Result (ug/L)
Benzene	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethylene	ND
trans-1,2-Dichloroethylene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Ethyl benzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethylene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethylene	ND
Trichlorofluoromethane	ND
Vinyl chloride	ND

Surrogate Standards	Recovery %
1,2-Dichloroethane-D4	90
Toluene-D8	109
Bromofluorobenzene	96

Method: Volatile Organic Analysis EPA method 624 (GC/MS)
ND = Nondetectable Limit of detection: <2 ug/L

ESA LABORATORIES, INC.

HSL COMPOUNDS

[illegible]
HALEY & ALDRICH

ESAL Job No.: 89-512
P.O. No.: 100[illegible]-41
Date Received: 02/09/89
Date Analyzed: 02/13/89

Sample No.: 89-0512

Sample ID: Method Blank

Analyte	Result (ug/L)
Acetone	ND
Carbon Disulfide	ND
2-Butanone (MEK)	7.2
Vinyl acetate	ND
2-Hexanone (MBK)	ND
4-Methyl-2-pentanone (MIBK)	ND
Styrene	ND
Total Xylenes	ND

Method: Volatile Organic Analysis, EPA Method 624 (GC/MS), Additional HSL compounds

Limit of Detection: <5 ug/L

ND = Nondetectable

ESA LABORATORIES, INC

PESTICIDES AND PCB'S

[illegible]
HALEY & ALDRICH, INC

ESAL Job No. : 890512
P.O. Number: 10003-41
Date Received: 02-09-89
Date Analyzed: 02-17-89

Sample Description: 890512-01 Sample ID: Water, 10003-41,
B1-OW

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	0.80	0.05
beta-BHC	0.55	0.05
delta-BHC	ND	0.05
gamma-BHC	ND	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	ND	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	1.17	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

[illegible] TALLAMORE
HALEY & ALDRICH, INC

ESAL Job No. : 890512
P.O. Number: 10003-41
Date Received: [illegible]-09-89
Date Analyzed: 02-17-89

Sample Description: 890512-02 Sample ID: Water, 10003-41,
B6-OW

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	ND	0.05
beta-BHC	0.49	0.05
delta-BHC	ND	0.05
gamma-BHC	ND	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	ND	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	ND	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PESTICIDES AND PCB'S

[illegible]
HALEY & ALDRICH, INC.

ESAL Job No. : 89-51
P.O. Number: 10003-41
Date Received: 02-04-89
Date Analyzed: 02-17-89

Sample Description: 890512-05 Sample ID: Water, 10003-41,
8202-OW

Analyte	RESULT (ug/L)	LOD (ug/L)
alpha-BHC	0.34	0.05
beta-BHC	0.18	0.05
delta-BHC	ND	0.05
gamma-BHC	0.12	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor Epoxide	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.10
4,4'-DDE	ND	0.10
Endrin	ND	0.10
Endosulfan II	ND	0.10
4,4'-DDD	ND	0.10
Endosulfan Sulfate	0.18	0.10
4,4'-DDT	ND	0.10
Endrin Ketone	ND	0.10
Methoxychlor	ND	0.5
Chlordane	ND	0.5
Toxaphene	ND	1.0
AROCLOR-1016	ND	0.5
AROCLOR-1221	ND	0.5
AROCLOR-1232	ND	0.5
AROCLOR-1242	ND	0.5
AROCLOR-1248	ND	0.5
AROCLOR-1254	ND	1.0
AROCLOR-1260	ND	1.0

Method: EPA Method 8080

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

PETROLEUM IDENTIFICATION

ELEF TALIADOUROS
HALEY & ALDRICH, INC.

ESAL Job No.: 89021
P.O. No. 10003-41
Date Received: 02-09-89
Date Analyzed: 02-17-89

SMP NO.	DESCRIPTION	PETRO. HC (MG/L)	PET. ID
01	B1-OW	<1	no identifiable pattern
02	B6-OW	<1	trace gasoline
03	B11-OW	1	gasoline
04	B201-OW	<1	no identifiable pattern
05	B202-OW	1	trace of gasoline

Sample Prep. EPA Method 9070

ESA LABORATORIES, INC.

TOTAL PETROLEUM HYDROCARBONS

KLEO KALIADOURIS
HALEY & ALDRICH INC

ESAL Job No.: 890511
P.O. Number: 10003-4
Date Received: 02-09-89
Date Analyzed: 02-16-89

	TEST DESCRIPTION	METHOD
(O&G):	OIL & GREASE - IR	EPA 413.2
(TPH):	PETROLEUM HC - IR	EPA 418.1

SMP NO.	DESCRIPTION	O&G (MG/L)	TPH (MG/L)
01	B1-OW	2	2
02	B6-OW	2	2

Sample Prep. EPA Method 9070

ESA LABORATORIES, INC.

PP.T

[illegible]
HALEY & ALDRICH, INC.

ESAL Job No.: 89051[illegible]
P.O. Number: 10003-41
Date Received: 02/09/89
Date Analyzed: 02/21/89

Sample No.: 89051[illegible]-01

Sample ID: Water, 10003-41,
B1-OW

Analyte	Result (mg/L)	LOD (mg/L)	Method
Antimony	ND	0.1	204.1
Arsenic	ND	0.002	226.3
Beryllium	ND	0.005	210.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.005	218.1
Copper	ND	0.02	220.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Nickel	0.18	0.04	249.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1
Thallium	ND	0.1	279.1
Zinc	0.006	0.005	289.1

Sample Prep.: EPA 3010

ND = Nondetectable LOD = Limit of Detection

ESA LABORATORIES, INC.

[illegible]

[illegible] ALDRICH
HALEY & ALDRICH, INC.

ESAL Job No.: 89-512
P.O. Number: 10073-41
Date Received: 02/09/89
Date Analyzed: 02/21/89

Sample No.: 890512-02

Sample ID: water, 10073-41,
B6-OW

Analyte	Result (mg/L)	LOD (mg/L)	Method
Antimony	ND	0.1	204.1
Arsenic	ND	0.002	226.3
Beryllium	ND	0.005	210.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.005	218.1
Copper	ND	0.02	220.1
Lead	ND	0.05	239.1
Mercury	ND	0.0002	245.1
Nickel	0.23	0.04	249.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1
Thallium	ND	0.1	279.1
Zinc	ND	0.005	289.1

Sample Prep.: EPA 3010

ND = Nondetectable   LOD = Limit of Detection

ESA LABORATORIES, INC

[illegible]

For: [illegible]	ESAL [illegible] No.: 89-51
HALEY & ALDRICH, INC.	P.O. Number: [illegible]-41
	Date Received: 12/[illegible]/89
	Date Analyzed: [illegible]/89

Sample No.: 890512-05

Sample ID: Water, 10003-41, B202-OW

Analyte	Result (mg/L)	LOD (mg/L)	Method
Antimony	ND	0.1	204.1
Arsenic	0.002	0.002	226.3
Beryllium	ND	0.005	210.1
Cadmium	ND	0.005	213.1
Chromium	ND	0.005	218.1
Copper	ND	0.02	220.1
Lead	ND	0.05	239.1
Mercury	0.0013	0.0002	245.1
Nickel	0.21	0.04	249.1
Selenium	ND	0.002	270.3
Silver	ND	0.01	272.1
Thallium	ND	0.1	279.1
Zinc	ND	0.005	289.1

Sample Prep.: EPA 3010

ND = Nondetectable LOD = Limit of Detection

RAI

Resource Analysts, Inc
Subsidiary of MILLIPORE
P.O Box 778 One Lafayette Road
Hampton, N.H. 03842
(603) 926-7777

To:

Ms. Rosemary Payne
ESA Laboratories
43 Wiggins Avenue
Bedford, MA 01730

P.O. Number: L890215

Date Received: 02/10/89 (1600)

Lab Number: 16,234

Date Reported: 02/22/89

Attached please find test results for acid/base/neutral extractable organic compounds.

Parameter: Total Cyanide (mg/L) Matrix: Water
Date Analyzed: 02/17/89
Method/Reference: 335.2/40 CFR Part 136, Friday, October 26, 1984

HALEY & ALDRICH, INC. - GW SAMPLING - PARCEL 18 - H&A FILE 10003-41

Field Identification	Laboratory Number	Concentration
#1 B1-OW-0512-01	16,234-1	<0.01
2 B6-OW-0512-02	16,234-2	<0.01

Technical Director

2/22/89
Date

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

HALEY & ALDRICH, INC.
B1-OW - H&A FILE 10003-41, GW SAMPLING PARCEL 18

Laboratory Number: 16234-3
Sample Designation: B1-OW-0512-01
Date Extracted: 02/14/89
Date Analyzed: 02/15/89
Matrix: Water

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
N-NITROSODIMETHYLAMINE	BDL	25
PHENOL	BDL	10
Bis (2-CHLOROETHYL) ETHER	BDL	10
2-CHLOROPHENOL	BDL	10
1,3-DICHLOROBENZENE	BDL	10
1.4-DICHLOROBENZENE	BDL	10
BENZYL ALCOHOL	BDL	10
1.2-DICHLOROBENZENE	BDL	10
2-METHYLPHENOL	BDL	10
Bis (2-CHLOROISOPROPYL) ETHER	BDL	10
4-METHYLPHENOL	BDL	10
HEXACHLOROETHANE	BDL	25
N-NITROSODI-N-PROPYLAMINE	BDL	10
NITROBENZENE	BDL	10
ISOPHORONE	BDL	10
2-NITROPHENOL	BDL	10
2.4-DIMETHYLPHENOL	BDL	10
BENZOIC ACID	BDL	50
Bis (2-CHLORETHOXY) METHANE	BDL	10
2.4-DICHLOROPHENOL	BDL	10
1.2.4-TRICHLOROBENZENE	BDL	10
NAPHTHALENE	BDL	10
4-CHLOROANILINE	BDL	10
HEXACHLOROBUTADIENE	BDL	10
4-CHLORO-3-METHYLPHENOL	BDL	10
2-METHYLNAPHTHALENE	BDL	10
HEXACHLOROCYCLOPENTADIENE	BDL	10
2.4.6-TRICHLOROPHENOL	BDL	10
2.4.5-TRICHLOROPHENOL	BDL	50
2-CHLORONAPHTHALENE	BDL	10
2-NITROANILINE	BDL	50
DIMETHYLPHTHALATE	BDL	10
ACENAPHTHYLENE	BDL	10
2.6-DINITROTOLUENE	BDL	25
3-NITROANILINE	BDL	50
ACENAPHTHENE	BDL	10
2.4-DINITROPHENOL	BDL	50

	CONCENTRATION (ug/L)	DETECTION L (ug/L)
4-NITROPHENOL	BDL	50
DIBENZOFURAN	BDL	10
2.4-DINITROTOLUENE	BDL	25
DIETHYLPHTHALATE	BDL	10
4-CHLOROPHENYL-PHENYLETHER	BDL	10
FLUORENE	BDL	10
4-NITROANILINE	BDL	50
4.6-DINITRO-2-METHYLPHENOL	BDL	50
N-NITROSODIPHENYLAMINE (1)	BDL	10
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	10
4-BROMOPHENYL-PHENYLETHER	BDL	10
HEXACHLOROBENZENE	BDL	10
PENTACHLOROPHENOL	BDL	10
PHENANTHRENE	BDL	10
ANTHRACENE	BDL	10
DI-N-BUTYLPHTHALATE	BDL	10
FLUOROANTHENE	BDL	10
BENZIDENE	BDL	100
PYRENE	BDL	10
BUTYLBENZYLPHTHALATE	BDL	10
3.3-DICHLOROBENZIDINE	BDL	20
BENZO(a)ANTHRACENE	BDL	10
CHRYSENE	BDL	10
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	10
DI-N-OCTYLPHTHALATE	BDL	10
BENZO(b)FLUORANTHENE	BDL	10
BENZO(k)FLUORANTHENE	BDL	10
BENZO(a)PYRENE	BDL	10
IDENO(1.2.3-c,d)PYRENE	BDL	10
DIBENZO(a.h)ANTHRACENE	BDL	10
BENZO(g.h.i)PERYLENE	BDL	10

BDL = BELOW DETECTION LIMIT
METHOD REFERENCE: 40 CFR PART 136, FRIDAY. OCTOBER
METHOD 625

ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

HALEY & ALDRICH, INC.
SAMPLE B6-OW - H&A FILE 10003-41, GW SAMPLING - PARCEL 18

Laboratory Number:	16234-4
Sample Designation:	B6-OW-0512-02
Date Extracted:	02/14/89
Date Analyzed:	02/15/89
Matrix:	Water

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
N-NITROSODIMETHYLAMINE	BDL	25
PHENOL	BDL	10
Bis (2-CHLOROETHYL) ETHER	BDL	10
2-CHLOROPHENOL	BDL	10
1.3-DICHLOROBENZENE	BDL	10
1.4-DICHLOROBENZENE	BDL	10
BENZYL ALCOHOL	BDL	10
1,2-DICHLOROBENZENE	BDL	10
2-METHYLPHENOL	BDL	10
Bis (2-CHLOROISOPROPYL) ETHER	BDL	10
4-METHYLPHENOL	BDL	10
HEXACHLOROETHANE	BDL	25
N-NITROSODI-N-PROPYLAMINE	BDL	10
NITROBENZENE	BDL	10
ISOPHORONE	BDL	10
2-NITROPHENOL	BDL	10
2,4-DIMETHYLPHENOL	BDL	10
BENZOIC ACID	BDL	50
Bis (2-CHLORETHOXY) METHANE	BDL	10
2.4-DICHLOROPHENOL	BDL	10
1,2,4-TRICHLOROBENZENE	BDL	10
NAPHTHALENE	BDL	10
4-CHLOROANILINE	BDL	10
HEXACHLOROBUTADIENE	BDL	10
4-CHLORO-3-METHYLPHENOL	BDL	10
2-METHYLNAPHTHALENE	BDL	10
HEXACHLOROCYCLOPENTADIENE	BDL	10
2.4.6-TRICHLOROPHENOL	BDL	10
2.4,5-TRICHLOROPHENOL	BDL	50
2-CHLORONAPHTHALENE	BDL	10
2-NITROANILINE	BDL	50
DIMETHYLPHTHALATE	BDL	10
ACENAPHTHYLENE	BDL	10
2.6-DINITROTOLUENE	BDL	25
3-NITROANILINE	BDL	50
ACENAPHTHENE	BDL	10
2.4-DINITROPHENOL	BDL	50

	CONCENTRATION (ug/L)	DETECTION LIMI (ug/L)
4-NITROPHENOL	BDL	50
DIBENZOFURAN	BDL	10
2,4-DINITROTOLUENE	BDL	25
DIETHYLPHTHALATE	BDL	10
4-CHLOROPHENYL-PHENYLETHER	BDL	10
FLUORENE	BDL	10
4-NITROANILINE	BDL	50
4,6-DINITRO-2-METHYLPHENOL	BDL	50
N-NITROSODIPHENYLAMINE (1)	BDL	10
1.2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	10
4-BROMOPHENYL-PHENYLETHER	BDL	10
HEXACHLOROBENZENE	BDL	10
PENTACHLOROPHENOL	BDL	10
PHENANTHRENE	BDL	10
ANTHRACENE	BDL	10
DI-N-BUTYLPHTHALATE	BDL	10
FLUOROANTHENE	BDL	10
BENZIDENE	BDL	100
PYRENE	BDL	10
BUTYLBENZYLPHTHALATE	BDL	10
3,3-DICHLOROBENZIDINE	BDL	20
BENZO(a)ANTHRACENE	BDL	10
CHRYSENE	BDL	10
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	10
DI-N-OCTYLPHTHALATE	BDL	10
BENZO(b)FLUORANTHENE	BDL	10
BENZO(k)FLUORANTHENE	BDL	10
BENZO(a)PYRENE	BDL	10
IDENO(1.2.3-c,d)PYRENE	BDL	10
DIBENZO(a,h)ANTHRACENE	BDL	10
BENZO(g,h,i)PERYLENE	BDL	10

BDL = BELOW DETECTION LIMIT

METHOD REFERENCE: 40 CFR PART 136. FRIDAY. OCTOBER
METHOD 625

BOSTON PUBLIC LIBRARY
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ACID/BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

HALEY & ALDRICH, INC.
SAMPLE B202-0W, H&A FILE 10003-41, GW SAMPLING, PARCEL 18

Laboratory Number:	16234-5
Sample Designation:	B202-0W-0512-05
Date Extracted:	02/14/89
Date Analyzed:	02/15/89
Matrix:	Water

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
N-NITROSODIMETHYLAMINE	BDL	25
PHENOL	BDL	10
Bis (2-CHLOROETHYL) ETHER	BDL	10
2-CHLOROPHENOL	BDL	10
1,3-DICHLOROBENZENE	BDL	10
1,4-DICHLOROBENZENE	BDL	10
BENZYL ALCOHOL	BDL	10
1,2-DICHLOROBENZENE	BDL	10
2-METHYLPHENOL	BDL	10
Bis (2-CHLOROISOPROPYL) ETHER	BDL	10
4-METHYLPHENOL	BDL	10
HEXACHLOROETHANE	BDL	25
N-NITROSODI-N-PROPYLAMINE	BDL	10
NITROBENZENE	BDL	10
ISOPHORONE	BDL	10
2-NITROPHENOL	BDL	10
2,4-DIMETHYLPHENOL	BDL	10
BENZOIC ACID	BDL	50
Bis (2-CHLORETHOXY) METHANE	BDL	10
2,4-DICHLOROPHENOL	BDL	10
1,2,4-TRICHLOROBENZENE	BDL	10
NAPHTHALENE	BDL	10
4-CHLOROANILINE	BDL	10
HEXACHLOROBUTADIENE	BDL	10
4-CHLORO-3-METHYLPHENOL	BDL	10
2-METHYLNAPHTHALENE	BDL	10
HEXACHLOROCYCLOPENTADIENE	BDL	10
2,4,6-TRICHLOROPHENOL	BDL	10
2,4,5-TRICHLOROPHENOL	BDL	50
2-CHLORONAPHTHALENE	BDL	10
2-NITROANILINE	BDL	50
DIMETHYLPHTHALATE	BDL	10
ACENAPHTHYLENE	BDL	10
2,6-DINITROTOLUENE	BDL	25
3-NITROANILINE	BDL	50
ACENAPHTHENE	BDL	10
2,4-DINITROPHENOL	BDL	50

	CONCENTRATION (ug/L)	DETECTION LI (ug/L)
4-NITROPHENOL	BDL	50
DIBENZOFURAN	BDL	10
2,4-DINITROTOLUENE	BDL	25
DIETHYLPHTHALATE	BDL	10
4-CHLOROPHENYL-PHENYLETHER	BDL	10
FLUORENE	BDL	10
4-NITROANILINE	BDL	50
4,6-DINITRO-2-METHYLPHENOL	BDL	50
N-NITROSODIPHENYLAMINE (1)	BDL	10
1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	10
4-BROMOPHENYL-PHENYLETHER	BDL	10
HEXACHLOROBENZENE	BDL	10
PENTACHLOROPHENOL	BDL	10
PHENANTHRENE	BDL	10
ANTHRACENE	BDL	10
DI-N-BUTYLPHTHALATE	BDL	10
FLUOROANTHENE	BDL	10
BENZIDENE	BDL	100
PYRENE	BDL	10
BUTYLBENZYLPHTHALATE	BDL	10
3,3-DICHLOROBENZIDINE	BDL	20
BENZO(a)ANTHRACENE	BDL	10
CHRYSENE	BDL	10
Bis(2-ETHYLHEXYL)PHTHALATE	BDL	10
DI-N-OCTYLPHTHALATE	BDL	10
BENZO(b)FLUORANTHENE	BDL	10
BENZO(k)FLUORANTHENE	BDL	10
BENZO(a)PYRENE	BDL	10
IDENO(1,2,3-c,d)PYRENE	BDL	10
DIBENZO(a,h)ANTHRACENE	BDL	10
BENZO(g,h,i)PERYLENE	BDL	10

BDL = BELOW DETECTION LIMIT

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER
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